DOCUMENT RESUME

ED 029 956 VT 007 881

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The Impact of Technological Change: The American Experience. Studies in Employment and Unemployment.

Upjohn (W.E.) Inst. for Employment Research, Kalamazoo, Mich.
Pub Date Sep 63
Note-67p.
Available from-W.E. Upjohn Institute for Employment Research, 1101 Seventeenth Street, N.W., Washington, D.C. 20036 (single copies without charge)
EDRS Price MF-$0.50 HC-$3.45
Descriptors-*Automation, Individual Characteristics, Job Layoff, Job Placement, Literature Reviews, Management, *Manpower Utilization, Occupational Mobility, Relocation, Skill Obsolescence, *Socioeconomic Influences, *Technological Advancement, *Technology, Vocational Adjustment, Work Simplification

Technological change is a complex term involving many more factors than "changes in machinery or automation." Six changes which affect jobs and influence skills in our industrial systems that could logically be called technological change have been identified: (1) scientific management, or time and motion studies, (2) mergers and consolidations, (3) changes in the locations of plants, (4) shifts in product demand, (5) changes in machinery and technology, and (6) automation. A review of the literature does not reveal a neat group of hypotheses that can be clearly delineated. However, four major problem areas have received repeated attention: the factors affecting reemployment of displaced workers, the process of finding a job, the mobility of displaced workers, and the economic and non-economic consequences of job displacement. (CH)

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THE IMPACT OF TECHNOLOGICAL CHANGE; THE AMERICAN EXPERIENCE.

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September 1963

Published by
The W. E. Upjohn Institute for Employment Research,
300 South Westnedge Avenue
Kalamazoo, Michigan 49007

VT007881

Studies in Employment and Unemployment

The W. E. Upjohn Institute for Employment Research

THE INSTITUTE, a privately sponsored nonprofit research organization, was established on July 1, 1945. It is an activity of the W. E. Upjohn Unemployment Trustee Corporation, which was formed in 1932 to administer a fund set aside by the late Dr. W. E. Upjohn for the purpose of carrying on "research into the causes and effects of unemployment and measures for the alleviation of unemployment."

One copy of this bulletin may be obtained without charge from the Institute in Kalamazoo or from the Washington office, 1101 Seventeenth Street, N.W., Washington, D.C., 20036. Additional copies may be obtained from the Kalamazoo office at a cost of 50 cents per copy.

Foreword

Serious public concern with technological unemployment is not a new development in American society. The present excitement about automation and its consequences may have created such an impression. Since the 1920's, when the phrase was first used, a number of inquiries have been made concerning the amount of technological job displacement, the economic and human consequences of such displacement, and the methods used to alleviate the problem. Consequently, we have accumulated a considerable stock of knowledge about job displacement.

The economists looking at the problem from the viewpoint of the "long run" may contend — and many have contended — that "technological unemployment is impossible." We know, however, that whatever may be the case in the long run, there are shortrun consequences of technological change, many of which lead to job loss.

This report is designed to review what we have learned from the earlier studies of technological change. Our aim is to summarize and appraise the findings of specific research inquiries which have been made into the adjustment to technological change during the past 30 years. It is our hope that this work will provide some guide in dealing with the problems of adjustment to current technological change.

August 1963 WILLIAM HABER

Acknowledgments

Many individuals contributed to this report. We especially thank the following people. First, we acknowledge our gratitude to the W. E. Upjohn Institute for Employment Research for sponsorship and interest. Samuel V. Bennett and Mrs. Katherine Ford, staff members of the Institute, were active in editing and reorganizing the material into its present form. They made many valuable and worthwhile suggestions which enhanced the value of the manuscript. The report was also discussed with Dr. Herbert E. Striner of the Institute staff, and a number of his wise comments were incorporated into the manuscript.

We would like to express appreciation to the Institute of Labor and Industrial Relations of the University of Michigan-Wayne State University, and particularly to its co-directors, Ronald W. Haughton and Charles Rehmus, who saw the value of this study and made available technical assistance.

We owe a debt of gratitude to Dr. Richard C. Wilcock and Dr. Walter H. Franke of the University of Illinois for permission to use a number of their unpublished studies of Armour Company plant shutdowns.

Use was also made of unpublished data on ex-Ford workers in Buffalo, New York. For this we would like to thank Dr. Irving Fowler of the School of Social Work, University of Buffalo, and Dr. Luke M. Smith of Alfred University.

Finally, we thank Mrs. Joyce Kornbluh, who edited the first drafts of the manuscript, and Marilyn Keith, who was largely responsible for the typing.

Of course, the authors bear full responsibility for the study and the presentation of data.

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August 1963

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I. Introduction

This report represents a stocktaking of past research on job displacement—an attempt to examine critically the findings of a number of studies and to see what conclusions can be drawn. It was not our intention to design and carry out a new field investigation of job displacement or the impact of technological change. The object of our task is to examine studies which have already been made and to determine what general findings exist on job displacement in the United States over the last three decades.

Between 1929 and 1961, one can easily identify 17 studies dealing with the adjustment to job displacement in the United States.[1] Geographically, the studies cluster in the eastern and north central states; and they cover a number of industries, products, and occupations. We will make reference to Robert J. Myers' study of the adjustment of ex-clothing cutters in Chicago to job displacement in 1929 (10) and to the study of ex-rubber workers by Clague, Couper, and Bakke in New Haven and Hartford in the same year (2). In the 1930's three studies of job displacement proved relevant to our inquiry—the study by Palmer and Williams, in 1936, of ex-hosiery workers in Philadelphia textile mills (11); the study by Creamer and Coulter, in 1936, of ex-textile workers in Manchester, New Hampshire (3); and the study by Creamer and Swackhamer, in 1937, of ex-cigar makers in Manchester, New Hampshire (4). During the 1940's Myers and Shultz studied the adjustment to job displacement made by ex-textile workers in Nashua, New Hampshire (9); and Adams and Aronson studied the experiences of workers left jobless by the shutdown of the International Harvester plant in Auburn, New York (1). In the 1950's and 1960's, there were: the study made by Sheppard and Stern on the impact of automation on an auto supplier firm in Detroit (13); Wilcock's study of displaced steel car workers in Mt. Vernon, Illinois (14); the study of the shutdown of the Packard Motor Company by Sheppard, Ferman, and Faber (12); the work by Ferman and Hudson on the shutdown of the Bridgeport Brass Company (6); the study by Ferman on the adjustment of newspaper workers to job displacement in Detroit (5); and the work by Wilcock and Franke on the adjustment of ex-Armour workers to plant shutdowns in the meat processing and meat packing industry (15), (16), and (17).

[1] Throughout this text, these studies will be referred to by number, as listed in the bibliography. The appendix contains a tabulation of the studies in chronological order. In this chapter we shall refer to the time in which the studies were conducted rather than their dates of publication.

Since we conceived of this review as a comparative investigation of job displacement, we limited our selection to 17 studies which had comparable data. Although not all studies on job displacement between 1929 and 1961 will be included in this work, we believe that the important research of this period is represented.

But the present undertaking is more than a review of past research or a search for empirical generalizations about the adjustment of workers to job displacement. Our work is not a casual inquiry: it has a bearing on the most serious problem in the American economy over the past 20 years —the ability of our economic system to absorb large numbers of workers displaced by technological change or plant shutdowns. We are concerned largely with the dynamics of job displacement in the last two decades of technological change.

The Problem of Technological Change

As we conceive of it, technological change is a complex term, involving many more factors than "changes in machinery" or "automation." We can identify six changes which affect jobs and influence skills in our industrial system that could logically be called technological change. These would include (1) scientific management or time and motion studies, (2) mergers and consolidations, (3) changes in the locations of plants, (4) shifts in product demand, (5) changes in machinery and technology, and (6) automation. Let us consider each of these in turn.

Scientific Management or Time and Motion Studies

Attempts to rationalize work efforts date back to the earliest production systems. The change from the guild system and the domestic system to the factory system can be viewed as the attempt by the merchant capitalist to gain greater coordination and control over work operations and to standardize the production process. The work of Frederick Winslow Taylor in the latter part of the 19th century was a continuation of these early efforts to rationalize the job, to weed out low production workers, to make labor savings, and to increase production. Scientific management, or time and motion study, as Taylor's work came to be known, was based on the assumptions that there is a most efficient way to do each job; that this "best way" can be learned through a thorough study of the job; and that the worker can be instructed in the most efficient and economical methods to perform the job. Taylor and his followers reasoned that job efficiency benefited labor through higher wages and benefited management

through increased productivity.[2] Efficiency became the new standard of industrial operation. With the introduction of the time and motion principles, changes were made in skill demands and personnel practices. Many workers with lengthy service in a company and extensive job experience often could not meet the new work standards; nor could they be retrained successfully. They were forced to seek new jobs.

Taylor's ghost is still with us today. Scientific management is no longer a crude set of techniques to set rates or standardize job efficiency. Today's time and motion men have received professionalized training in engineering and employ the most modern techniques to measure productivity and set rates. The stopwatch has been supplemented by the movie camera. The number of jobs which come under scrutiny has increased; even the white-collar world has been invaded by the men with the slide rules, stopwatches, and cameras.[3] Scientific management has become an integral part of the American industrial system. It is not a temporary phenomenon; nor is it merely a collection of techniques to improve productivity. The doctrine possesses the force of an ideological conviction, molding the very character of the industrial system.

Mergers and Consolidations

Continuous merger and consolidation of economic units today mark the American industrial system. In the automobile industry, Packard consolidated with Studebaker; Hudson and Nash-Kelvinator gave birth to American Motors; Kaiser-Fraser merged with the Willys Overland. Philco has recently been absorbed by the Ford Motor Company. Multiple titles of many daily and weekly newspapers indicate that mergers between publishers have been common.

From Hollywood, where major film studios have merged with television networks, to the East Coast, where it seems likely that the New York Central and Pennsylvania railroads will merge in the future, the tendency has been toward the merger and consolidation of economic units.

The trend in the United States toward larger economic units through merger and consolidation stems from three basic facts of economic life.

[2]Taylor's motive in stressing efficiency in work stemmed from his belief that higher productivity with benefits to management and workers was the only path to industrial peace. Taylor could not understand the workers' resentment toward him. He could not see why the workers burned him in effigy in Philadelphia. For Taylor, scientific management was a key to industrial peace and a moral imperative; the technical considerations were secondary.

[3]In the last two years, time and motion studies have become a regular feature of office operations in the Eastman Kodak Company and the Chase Manhattan Bank. In the Eastman Kodak Company, a sharp reduction in the work force is said to have resulted from this development.

First, the economic unit that wants to remain competitive must gain a greater degree of control and coordination over its production process. This means that instead of "farming out" contracts to supplier firms, the company may purchase the supplier firm and incorporate it into the larger economic unit. Second, investment costs for capital replacement and for research have risen sharply. The merger and consolidation of economic units may act to reduce these costs. Third, there has been a trend toward diversification of production for the company that previously produced a single product. Such diversification acts as a buffer against seasonal fluctuation in the demand for a single product or the possible obsolescence of that product, and is often achieved through mergers with companies producing other products.

Public concern about workers likely to be displaced by mergers and consolidation has been evident since the early 1930's. The Emergency Railroad Transportation Act of 1933 recognized the necessity of protecting the railroad employees against such mergers. On May 21, 1936, most of the nation's railroads and 21 unions signed the Washington Job Protection Agreement providing:

> . . . dismissal allowances equal to sixty per cent of previous average monthly compensation for up to five years, depending upon length of past service, to employees who are laid off as a result of a "coordination." Employees who are shifted to lower-paying jobs are entitled to displacement allowances equal to the full loss in earnings for a five-year period. Employees who incur moving expenses and residence property losses as the result of a coordination are to be reimbursed by the railroad.[4]

Collective bargaining agreements have increasingly made such compensation features of the contract. The meat packing and processing industry has provided such compensation since 1949. Rarely, however, is the worker protected when one economic unit buys the assets of another unit. The owners of the *Detroit News,* for example, bought only certain assets of the *Detroit Times,* and were not obliged to provide jobs for the ex-Timesmen. Like scientific management, mergers and consolidation of economic units are rooted in the ideological bases of the American industrial system and will continue to be a major factor in temporary job displacement.

Changes in the Location of Plants

Another major factor in job displacement is the movement of industrial

[4]Everett D. Hawkins, *Dismissal Compensation* (Princeton: Princeton University Press, 1940), p. 157.

and commercial plants to other geographical locations. In the 1930's and 1940's the textile industry moved from New England to the southeastern states, eliminating approximately 100,000 jobs in New England.

Following World War II, the loss of defense contracts to other geographical areas resulted in the loss of an estimated 180,000 defense jobs in Michigan. The decentralization of the automobile industry from Detroit and other Michigan communities to other states led to the loss of approximately 128,500 Michigan jobs between 1948 and 1962. The loss of Michigan furniture factories to the South also meant fewer jobs in the state. The shoe industry moved from southeastern Massachusetts to northern New England and the southeastern states. Meat packing and meat processing operations, previously centralized in Chicago, were shifted to Iowa, Nebraska, and other western states. These changes resulted in the loss of jobs for those employed in the industry, and also in the loss of possible jobs for youths entering the labor market in the area where the plants had been located.

The decision to move a plant from one community to another, or the decision to close a plant permanently, stems from a variety of factors. These may include the desire on the part of management to move a plant closer to the market area or to the area where raw materials are plentiful in order to save on transportation costs. The decision to move may be motivated by disadvantages in labor or production costs. Frequently the management may feel that the tax structure or community climate is more desirable in another part of the country. Whatever the reason, the decision to move a plant is closely tied to a desire to better the company's competitive position. Thus the movement of plants is undoubtedly a permanent feature of the American economy and will continue to be a factor in job displacement for some time to come.

Shifts in Product Demand

One of the most striking features of the American economy is the continuous change which occurs in the demand for products and services. The carriage has been replaced by the railroad coach which, in turn, has been replaced by the automobile and the airplane. The revolution in the use of fuel is truly staggering and defies the imagination. In the last two decades, the production of anthracite coal has shown a marked decline from 56 million tons in 1941 to 42 million tons in 1951, and to 17 million tons in 1961. In other words, there was more than a two-thirds decline in the production of anthracite between 1941 and 1961; there was also a decline in bituminous coal production. On the other hand, the production of

natural gas doubled between 1941 and 1961; and between these same years, the production of crude petroleum oil increased substantially.

A parallel shift is to be noted in metals. Between 1951 and 1961, aluminum production almost doubled—it increased from 836 thousand tons to almost 2 million tons. During the same period, lead production declined by 80,000 tons, and steel ingot production declined by 7 million tons.

The shift in product is also seen in the new demand for dacron material in the textile industry, plastics in the container industry, transistorized radios in the communication industry, and compact autos in the automobile industry. These changes stem from a crosscurrent of pressures in the American economy. The manufacturer demands the new product because it may save costs, as in the case of fuel, or because it may result in more efficient operation of his company. The consumer desires labor-saving devices or the latest fad. The impact of product changes on the labor market is quite apparent. The coal miner is not easily retrained for work in the oil refinery. The textile workers' economic security is certainly affected by the development of dacron produced in a chemical plant.

Changes in Machinery and Technology

The American industrial system is characterized not only by a search for efficient work procedures, but also by a search for more efficient machinery and technological systems. The arrival of the mass production system in the automobile industry 50 years ago is paralleled by production changes being made today in the white-collar field. The typing pool in many offices has become a logical extension of the production line principle. The production line has become accepted not only as a technical system but as a principle of social organization, stressing the need for efficiency and rationality in work operation.

Efficiency of operation is also reflected in mechanization changes in industry. More and more, the unit of production has become the machine and not the human animal. If a company is to survive competitively, it must pay attention to increased mechanization in the productive process since mechanization may mean savings in labor costs, greater predictability of production, and standardization of operation.

Mechanization on the farm has, undoubtedly, accounted for the extensive decline in agricultural labor in the United States. In 1929 agricultural employment in the United States was 9.9 million. By 1950 this number decreased to 7.5 million; and by 1962, to 4.8 million. This exodus from the land has been triggered by the increased use of tractors and

threshing machines to operate large land units more efficiently and economically and by the use of laborsaving devices, such as milking machines, and temperature-controlled storage units to increase the efficiency of the dairy farm.

Mechanization has also had an impact on employment in steel production, mining, railroading, and longshoring. The appearance of oxygen converters and new press equipment in the steel industry during the last 10 years has contributed to a loss of almost 80,000 blue-collar jobs. The use of electrical drills and choppers in mining, undoubtedly, was a factor in the loss of 300,000 mining jobs between 1941 and 1962. Between 1945 and 1956, there was a loss of almost 380,000 jobs in railroading—many because of increased mechanization and the use of laborsaving devices. The serious inroads on employment in railroading and longshoring have become a main consideration in collective bargaining. The great concern is to protect the employees and to insulate them from the decline in employment opportunities brought about by mechanization and changes in technology.

Here again is a deeply rooted American tradition in industry—to improve the efficiency and productivity of the economic unit through mechanization and laborsaving devices. These goals are ingrained into the very character of the industrial system and, as such, will continue to be a constant source of job dislocation and displacement.

Automation

"Automation" is a word that is frequently discussed today but little understood. It is not merely mechanization, as we have discussed it, although machines are involved in the automation process. As machines are replaced by more advanced machines and manual skills are replaced by nonmanual skills, the factory worker must depend more on conceptual verbal knowledge than on manual ability. Automation is also distinct from the rationalization of work characterized by scientific management and the development of new technological systems. In rationalization, the decisions regarding efficiency and change are still controlled by coordinated judgments of an engineering elite. In automation, the decisions to be made, their alternatives, and the criteria of selection are built into the production system, and remain free from the coordinated judgments of the elite. As Conrad M. Arensberg has noted:

> The "flow of work" on the assembly line, or between one machine and the next, and the coordination of pace and precision which substituted the repetitious, standardizing machine for the

> human hand and eye, are now being built into the plant and machines and control of the factory itself. In this sense we are achieving "automatic production" in one industry after the other, and the machine-tender will be free. He may, as is already the case in oils and chemicals, become dial-watcher, chart-reader, and "stationary engineer." But his job need never bind him to small moving parts in one spot and to the old monotony and fixity which made him over the years an "interchangeable hand" tending an "interchangeable machine" making "interchangeable parts" against the stopwatch and moving line of the coordinating manager-engineer.[5]

The impact of automation on the content of a job, on the existing skill hierarchy, and on employment opportunities is apt to be extensive. The skills used in the traditional factory become obsolete in the automated unit; consequently, workers must undergo retraining—extensive in some cases—to fit into the new work situation. Inevitably this will mean that some downgrading of jobs will occur; indeed, some workers will never fit or be placed into the new production system.

It is difficult to assess the actual impact of automation in a quantitative sense. Automation is often compounded by the processes of rationalization and mechanization; the exact importance of one factor *vis à vis* the others is hard to isolate and evaluate. It seems clear, however, that the American industrial system has not as yet experienced the full effects of automation since relatively little automation has occurred in the total American industrial scene. The full story of automation and job displacement has yet to unfold.

The Longrun and Shortrun Consequences of Technological Change

It is inevitable that these dynamics of our free enterprise system will create problems. Should they all be classified under progress? There can be no doubt of this. The economist and the sociologist can see the longrun benefits of these processes; the contribution of these benefits to the economic progress of the nation cannot be questioned. These processes are intimately linked to economic growth. To impede them would seriously threaten our future welfare. In fact, the new economic religion of the sixties is predicated on economic growth. The economist presupposes that

[5]Conrad M. Arensberg, "Work and the Changing American Scene," *in* Sigmund Nosow and William H. Form, eds., *Man, Work and Society* (New York: Basic Books, Inc., 1962), p. 26.

these changes which we have discussed will happen at a faster rate. We can probably grapple with the longrun consequences of these changes. Indeed, there are social currents in American society which give us a basis for optimism in dealing with the problems caused by these changes.

1. *Population growth and the growth of a high standard of living.* There is every reason to believe that, in the long run, a great expansion in productivity and services is needed to meet the demands of an ever-growing population and of an ever-increasing standard of living in American society. In 1960 we had a population of almost 180 million. Projections indicate that by 1970 we will have 214 million people, and by 1980. 260 million people. Such growth can only mean a greater demand for products and services which, in turn, will create new jobs.

There is also every indication that the standard of living will rise for most Americans, creating a greater market for products and services than ever before. Today this is reflected in the sharp rise in the sales of automobiles and television sets, the continuing rise of expenditures for recreation, the greater investment in advertising made by business during the last two decades, and the extension of installment and noninstallment credit over the past decade. These trends bode well for the future of the economy and, in the long run, can mean only new, unprecedented job opportunities.

2. *Insatiable wants and basic needs.* It is also reasonable to expect that increasing demands for higher education, health services, and labor-saving devices will necessitate expansion of a number of segments of our economy. The demand for better housing, more social services, and convenience in transportation will also have an impact and, in turn, will create jobs.

3. *Research and development.* We are currently investing between $15 and $16 billion in the research and development of new products and technological systems. We would indeed be pessimistic if we doubted that this activity would create new products and businesses in the future with a consequent rise in employment opportunities. Today's research in space technology, medicine, and distribution will have important employment consequences for the future.

All of these factors will create jobs for the long-term absorption of the displaced workers of today. In 1910 no one would have predicted the need for auto mechanics in the 1960's. It would have been impossible in 1940 to predict the importance of atomic energy or electronics to our economic future. The development of electronics, for example, created a virtual

explosion of jobs in the last decade and caused fantastic growth in several sections of the country. A decade or two ago, could one have foreseen the razing of the economically eroded and blighted areas of a central city which led to the rebuilding of urban areas in many parts of the country? Urban redevelopment may well be a major source of job growth in the next decade. The scientific crystal ball does not tell us specifically what the future impact of some of these changes will be, but one would have to be blind to the lessons of recent economic history to be pessimistic about the longrun job outlook.

The problem of job displacement over the last 30 years in American society has resulted from our inability to facilitate the shortrun adjustment of workers affected by some of the changes that we have discussed. In the long run, we have seen sizable numbers of displaced workers reabsorbed into productive work operations. The decline in agricultural workers is a good case in point. Over the last 50 years, there has been a continuous displacement of agricultural workers from the land. Fortunately, the economy has been able to absorb these surplus workers into manufacturing, trade, and service industries. We fail to realize that between 1950 and 1962 farm employment fell from 7.5 million to 4.8 million, a truly fantastic decline. During this same time, the railroads, the coal industry, and textiles peeled off unnecessary labor surpluses. Most of these workers were reabsorbed into the economy. A booming economy with a growth rate of five to seven percent would have facilitated and hastened the readjustment of these displaced workers. A "normal economy" with a growth rate of two and one-half to three percent creates a problem of persistent and hard-core unemployment by failing to provide opportunities for rapid adjustment to job displacement.

The labor market—largely a neutral factor—begins to reflect the consequences of this slow adjustment to these technological changes. The Survey Research Center of The University of Michigan reported that, in June 1961, 14.5 percent of the families in a nationwide survey had some member of the family unemployed for a period of time during the preceding year.[6] In the families that experienced some unemployment, 72 percent of the household heads had been unemployed once; 15 percent had been unemployed twice; and 13 percent had been unemployed three or more times.[7] Of the unemployed, 54 percent had experienced more than 15 weeks of unemployment, and 27 percent had experienced more than

[6]Eva Mueller and Jay Schmiedeskamp, *Persistent Unemployment, 1957-1961* (Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research, November 1962), table 1, p. 6.

[7]*Op. cit.*, p. 11.

27 weeks of unemployment.[8] These are statistics to give us concern about the problems of unemployment in our society.

Programs Dealing With Job Displacement

As a result, we are increasingly concerned about displaced workers and how they adjust to the loss of work. How long are they unemployed? What new jobs do they find? What changes occur in their skill level, wages, and industrial classification—not to mention morale? By intensively studying the unemployment and reemployment problems of the displaced workers, we are able to develop programs geared to the needs of these workers. In brief, economic growth alone cannot solve the short-run problems posed by job displacement. We must develop a series of tailormade programs on training and retraining, vocational guidance, and counseling if we are to aid these workers with their immediate problems and soften the impact of job displacement.

New programs have already been developed. The retraining provisions of the Area Redevelopment Act of 1961 and the Manpower Development and Training Act of 1962 are geared to the immediate problems of displaced workers. There is continuing discussion of the need for better vocational training and of the need for legislation to provide vocational training and jobs for youth. Legislation is also being considered to supplement the labor provisions of the Trade Expansion Act. All of these programs must be developed if the problems of job displacement are to be met.

Plan of the Report

Research into job displacement has consisted of a number of discrete case studies of plant shutdowns. Theoretical and substantive continuity has been lacking; consequently, there has been no systematic exploration of job displacement. A review of the literature does not reveal a neat group of hypotheses that can be clearly delineated. Four major problem areas, however, have received repeated attention: (1) the factors affecting reemployment of displaced workers, (2) the process of finding a job, (3) the mobility of displaced workers, and (4) the economic and noneconomic consequences of job displacement. This report reviews these four central research areas. Some overlapping is inevitable since we are dealing with a closely interrelated set of problems. In attempting to initiate a systematic research of job displacement, we have formulated a series of empirical propositions that may serve as reference points for future research.

[8] *Op. cit.*, table 3, p. 10.

II. Factors in the Reemployment of Displaced Workers

Research into the reemployment and adjustment of displaced workers has emphasized two separate sets of factors. The first is the status and personal characteristics of the displaced workers who find jobs. The second includes assistance to displaced workers through organized programs. In this chapter we shall review the findings in both areas. It should be emphasized that, in reality, these two sets of factors are very closely interrelated. For example, a strong state code on fair employment practices influences the extent to which certain discriminatory practices (e.g., race) operate in the reemployment of displaced workers. In this respect, we separate the two sets of factors for purposes of presentation with full awareness of their interdependence.

Status and Personal Characteristics

The traditional approach in job displacement literature has been to emphasize a number of factors as influences on reemployment: age, sex, race, skill, education, and seniority. The first five factors are regarded as the basis for discriminatory hiring practices, while the last factor is said to circumscribe the search for new jobs. The workers with high seniority may not fare well in the job market because they expect to be called back to work and hesitate to commit themselves to other jobs. Their long work experience may also predispose them to look for certain jobs and not for others.

Age

As early as 1929, analyses of job displacement noted a relationship between age and reemployment opportunities—Robert J. Myers (10); Lubin (8); Clague, Couper, and Bakke (2). In job displacement, age can influence reemployment in two ways. First, there can be discrimination against the older workers. They may be considered to have poor potential for retraining since their declining physical capacities may not permit them to perform satisfactorily. Another mark against the older workers may be financial; older workers would start drawing pensions relatively

soon after employment. Where older workers are employed, the companies' accident insurance coverage rates will be higher. Finally, because reemployed older workers usually have high seniority at their former places of employment, they may leave their new jobs and return to their old ones if given the opportunity.

Very young workers who have recently entered the labor force may also face limited job opportunities. These workers, especially in manufacturing industries, are likely to be handicapped by limited education and lack of skill. In a depressed labor market, the young unskilled workers may have as much trouble as older workers in locating a job.

Proposition: *Older workers find reemployment less readily than younger workers.*

This proposition is well documented in the literature. A strong relationship has been found between age and reemployment opportunities—the older the worker, the less the chance of his reemployment—Lubin (8); Creamer and Swackhamer (4); Palmer and Williams (11); Sheppard and Stern (13); Wilcock (14); Fowler and Smith (7); Ferman and Hudson (6); Wisconsin State Employment Service (18); Wilcock and Franke (17); Ferman (5). Age as a discriminating basis for hiring displaced workers has existed for a number of years. Although little is known about the relative importance of age, skill, race, and education to reemployment opportunities, the data from the study of ex-Packard Company workers in Detroit is suggestive. Age was shown to be more important than the other three variables in determining reemployment (12).

Discriminiation against older workers may manifest itself in a number of ways. The older workers may simply be told that no jobs are available or that they are too old for the jobs. A more subtle form of discrimination occurs when the older workers are offered jobs if they can pass the physical examination. Very often minor ailments may disqualify them for reemployment.

There are two exceptions to be noted to these findings. Robert J. Myers (10) found that ex-clothing cutters from 35 to 39 years of age had been most successful in several indices of adjustment and that remoteness from this age group in either direction had been accompanied by difficulties in adjustment. The relatively young and the relatively old ex-cutters had difficulties in finding new jobs. Clague, Couper, and Bakke (2) noted a similar finding. Workers under 30 and over 45 years of age had the most difficulty in finding reemployment. These two studies recognized hiring restrictions against both the older worker and the younger worker.

Sex

In our society the industrial and commercial world is often called the man's world. It is common knowledge that women receive less pay and promotional opportunities for the same work efforts. Although great strides have been made in the past two decades, women still find their job opportunities limited to a select number of white-collar and industrial jobs. Job displacement for women, then, may present a particularly acute problem.

Proposition: *Displaced men obtain new jobs more quickly than displaced women because of differences in attachment to the labor force and because of certain disadvantages in hiring women, as seen by employers.*

This proposition has been substantiated in a number of studies—Sheppard and Stern (13); Wisconsin State Employment Service (18); Wilcock and Franke (17); Ferman (5). In the study of ex-newspaper workers in Detroit, women at all levels of work found it more difficult than men to find reemployment in jobs that were open to both men and women.

There are a number of possible reasons for this differential in the various studies. Female workers who seek new jobs often do so with far less motivation than male workers. For many women, earnings from a job supplement an already existing income in the family; consequently there may be considerably less pressure for them to seek new employment in the labor market. Women may also find it difficult to engage in job seeking as freely as men because of their obligations as housewives and mothers.

Available jobs during an economic recession are often given to men rather than women because the feeling persists that women supplement the earnings in households. Male industrial workers often become resentful when women are hired because "they don't need the money." Management frequently discriminates against women in order to curb male resentment or to avoid a serious morale problem. Sex discrimination may also stem from the added costs of operation and production that result from hiring women. Accident insurance rates are often increased, and state work laws pertaining to women require the use of expensive safety devices not required for men. Finally, women, especially if they are single, are more prone to leave their jobs. The high turnover rates for women in industrial and commercial work often make the employment of men more desirable in the view of many companies.

Two exceptions to this proposition have been reported. In the study of the Candee Company rubber workers in New Haven, Clague, Couper, and Bakke (2) indicated that younger women fared better in the job market than men. In this case, special circumstances existed. Coincident with the closing of the plant, a number of needle trade operations began in New Haven. These industries hire younger women, and many of the displaced girls obtained new jobs. Among the female textile workers in Manchester, New Hampshire, studied by Creamer and Coulter (3), women over 34 years of age were reemployed as frequently as men. These women, however, were performing operations which were female-oriented. The women did not compete with men for the same jobs. Where jobs are available that call for female skills, the displaced women workers have a chance; but in jobs where men compete with women, the women are bound to be at a disadvantage.

Race

Race as a basis for job discrimination has been well documented. Several difficulties face the Negroes in seeking and holding jobs in urban industrial communities. First, there exist in American society a number of myths regarding Negroes and industrial work. Some contend that Negroes find it more difficult than whites to accept the discipline of the factory. Another version suggests that Negroes are less capable of learning industrial skills because they lack basic aptitudes or learning ability. These myths, along with others, exclude many Negroes from industrial work. Employers may also discriminate against Negroes on more realistic grounds. Negroes are less likely than whites to have a high level of education or a past history of specialized job training. The company may feel, then, that training Negroes for jobs will involve a greater expense than training whites. These considerations often make it difficult for Negro workers to find employment.

Proposition: *Displaced Negro workers are less likely than displaced white workers to find new jobs.*

The influence of race on the reemployment opportunities of displaced workers has been studied by Sheppard and Stern in Detroit (13); by Sheppard, Ferman, and Faber in Detroit (12); and by Wilcock and Franke in three cities (17). The proposition is confirmed by findings in two of the three studies cited. Sheppard and Stern in their study of an automobile supplier plant and Wilcock and Franke in their study of meat packing and processing plants in three cities found that displaced Negro workers were less likely to be reemployed. On the other hand, Negro

displaced workers who were separated from the Packard Motor Company in 1956 found jobs as frequently as displaced white workers. The investigators of this last study did note, however, that the Negro reemployed workers were more likely than reemployed white workers to lose their new employment over a period of time (12).

These findings deserve comment. In spite of relatively strong FEPC legislation in Michigan, where two of the studies were conducted, job opportunities differed for Negroes and whites. Were Negro workers discriminated against because of race, or did they have difficulty finding reemployment because they were less educated and less skilled than the displaced white workers? This question has not been answered in any of the research to date. It may be argued that job discrimination based on race occurs only in a depressed labor market where few jobs are available. The data gathered by Sheppard and Stern (13) belie this. In 1956, Detroit was characterized by a relatively full employment market with many job opportunities. Even in this kind of market, the displaced Negro workers in the auto supplier company proved to be less fortunate than the whites in obtaining reemployment. It would seem that in good or bad times real differences in reemployment occur between Negro and white workers who become unemployed.

Skill

Skill may affect reemployment opportunities in two ways. First, lack of special training may prevent individuals from obtaining certain jobs. The unskilled workers must seek employment in a market that is characterized by increasing mechanization of unskilled, repetitive work and where the requirements of new technology make some specialized knowledge necessary. They are not likely to find job seeking an easy task and usually will be forced to take work quite different from their old jobs. The "overskilled" workers may also have difficulties in finding jobs. Since technological change is the mode of life in this society, such change eliminates jobs not only for the unskilled but also for the skilled. Photoengraving in newspaper work is a highly skilled trade, but the continued rationalization of this work by machine processes makes it difficult for workers in this craft to find reemployment when they are displaced from their jobs. It is possible, then, that both the skilled and the unskilled find reemployment difficult after job displacement.

Proposition: *The less skilled workers find fewer job opportunities after job displacement than the skilled workers.*

The validity of this proposition has been confirmed in a number of

investigations—Lubin (8); Myers and Shultz (9); Adams and Aronson (1); Sheppard and Stern (13); Wilcock (14); Ferman and Hudson (6); Sheppard, Ferman, and Faber (12); Wisconsin State Employment Service (18); Ferman (5); Wilcock and Franke (17). The difference that skill made in reemployment varied from study to study, although the difference was apparent in all of the studies cited.

Among ex-Packard Motor Company workers in 1957, 92 percent of the skilled workers found jobs while the corresponding proportion among the semiskilled was 85 percent and among the unskilled was 71 percent (12).

Among the male workers who were displaced by the closing of the Autolite Company in LaCrosse, Wisconsin, 75 percent of the professional-semiprofessional-managerial group, 65 percent of the clerical and sales group, 67 percent of the skilled group, and 51 percent of the semiskilled and unskilled group found jobs during the study period (18).

Among ex-Armour workers in East St. Louis, 28 percent of the clerical workers and 21 percent of the craftsman-foreman group experienced 11 months or more of unemployment while 42 percent of the operatives, service workers, and laborers reported themselves to be without work for this length of time. Since the study period in this investigation was 12 months long, the percentages indicate the proportions who were not reemployed (17).

It is also apparent that the effects of skill on reemployment may be influenced by other status variables. Sheppard and his associates (12) reported that age considerations made a difference in reemployment opportunities at each skill level among ex-Packard Company workers in Detroit in 1958. Wilcock and Franke (17) also indicated that within each skill level education, race, sex, and age made a difference in reemployment of ex-Armour Company workers in three cities. They also noted that skill level had little to do with reemployment because few of the skills in meat packing were transferable to new jobs outside of meat packing and few job possibilities existed in this industry.

Specialized training does not always guarantee reemployment, especially if the skill is superseded by mechanization processes. The ex-cutters in Hart, Schaffner, and Marx found that the mechanization of cutting operations in the clothing industry had sharply limited their reemployment opportunities (10). The ex-cigar workers in Manchester, New Hampshire, found few new job opportunities following the introduction of machine processes into cigarmaking (4). Differences in reemployment may exist at the same skill level between occupational specialties. In the textile

companies studied by Creamer and Coulter (3) in Manchester, New Hampshire, reemployment differences existed among loom fixers, weavers, and carders. Parallel findings were reported for investigations of textile mills in Philadelphia (11). In these latter two studies, the occupational requirements of the new textile technology were more decisive than the distinction between skilled and unskilled in gaining reemployment.

Education

Modern changing technology places a strong emphasis on educational attainment. The displaced workers may soon find that the new skill hierarchy demands a level of verbal sophistication that they do not possess. This will be especially true if the available new jobs require retraining. Education may prove to be a more important factor than skill in reemployment. Since many skills are not transferable to new jobs, a level of verbal attainment is frequently necessary if some new jobs are to be learned satisfactorily.

Proposition: *The less educated displaced workers find reemployment more difficult than the displaced workers with a higher level of education.*

The data that exist tend to confirm this proposition. In the Mt. Vernon study, there was a marked difference in reemployment between workers with 12 years or more of education and workers with less than 12 years of education, although within each educational group there were differences in reemployment based on age (14). The study of the Bridgeport Brass Company in Adrian, Michigan, shows similar findings (6). In the Armour studies, retraining was available to qualified applicants, and those with a higher education did better than those with less education (15).

Seniority

Does past seniority on a job make it easier or harder for the displaced workers to find new jobs? Displaced workers with high seniority are bound to be older than workers with less seniority. Since age has been shown to have an effect on the reemployment opportunities of displaced workers, it is possible that the age factor may decrease the advantages of lengthy work experience in the job market. Displaced workers may find that loyalty to the company, lengthy service, and work experience—all valuable assets—do not count very much in finding new jobs. The workers with high seniority may feel that if the company reopens, their long service will entitle

them to job reinstatement with full restoration of job privileges. They may, therefore, limit their job seeking and attempt to get by on savings or unemployment insurance until the anticipated openings occur.

From a new employer's viewpoint, the displaced workers with high seniority may be bad job risks for several reasons. They are apt to be older and represent all of the disadvantages of older workers. Far from being an advantage, their long work experience may make it more difficult for them to be retrained for other work: they must unlearn before new learning can take place. Finally, their long service with another company may make them potential job quitters if the former company makes them offers. Work experience and service on an old job can militate against reemployment.

Proposition: *With some qualifications, displaced workers with high seniority fare no better in the job market than displaced workers with low seniority.*

There is some evidence to support this proposition. In their study of ex-automobile workers in Detroit, Sheppard and his associates (12) found that age and skill had more bearing on finding a job than length of service at the old plant. Seniority made no difference in reemployment among unskilled and semiskilled workers and made only a slight difference among the skilled workers. The skilled workers with long service had a somewhat better advantage in finding new jobs than the skilled workers with short service.

Among unskilled brass workers in Adrian, Michigan, length of service at the Bridgeport Brass Company meant very little in looking for new jobs. However, seniority at the plant was considered to be of potential importance in the job market since the union contract specified that any new management at the plant was required to honor the seniority list in hiring. Skilled brass workers with long service found it easier to get new jobs than skilled brass workers with short service (6). As in the study of ex-automobile workers in Detroit, length of service at the old job was not an important factor in reemployment among the less skilled.

One would suppose that length of service or work experience might be more important in the case of white-collar workers. Among skilled craftsmen from a former Detroit newspaper, length of service was a factor in reemployment. In bidding for new employment, seniority within the union was more important for these workers than seniority on the old job. Among the unskilled clerical workers on the newspaper, long service with the company did not mitigate the effects of age, lack of skill, or lack of education in hunting for a job (5). It would seem, then, that past rec-

ords of long service with a company do not make it easier for unskilled workers, whether in blue-collar or white-collar work, to find new jobs.

Summary Observations

What is the substance of the findings on status and personal characteristics? Of all the status characteristics, age appears to have the greatest effect on reemployment opportunities. Many of the studies reported that the older workers have a more difficult time than the younger workers in finding new jobs. The emphasis is on youth in our changing technological system, and the aged are at a disadvantage. Faithful service and long work experience alone reap few rewards for the older workers.

Education has assumed a prominent place in reemployment opportunities; the less educated are less likely than others to find new jobs. This is especially true in semiautomated and automated work where verbal skills are at a premium. Again this is a reflection of a dynamic and changing technological system. Although education is important, it is secondary to age in being a crucial factor in reemployment.

The skill level of the job seekers also influences their reemployment possibilities. The importance of this factor is indisputable, but there are some qualifications to the statement that the skilled workers always have an advantage in finding jobs. The study of ex-Packard workers in Detroit (12) and the study of ex-Armour workers in three cities (17) show that within a given skill group, age and education are considerations in reemployment. But in addition, the "overskilled" displaced workers sometimes find it difficult to obtain jobs when changing technology has made their specialties obsolete.

The sex and race of the displaced workers also affect reemployment, but these factors are less important than age, education, and skill level. There are no data in these studies of reemployment to indicate how much the sex factor may be affected by age, education, and skill level. The data on race indicate that the fewer job opportunities for Negroes are related more to their lack of education and lower skill level than to their status as Negroes (17).

These facts stand out. The older Negro females who are unskilled and uneducated have very few possibilities for reemployment when job displacement occurs. At the other extreme, opportunities are maximized for the young white males who are both skilled and educated. However, the data on the interrelation of these factors are incomplete, and further research in this area certainly would be indicated.

The second set of factors which may influence reemployment is assistance provided through organized programs. These include retraining programs (company- or government-sponsored); severance payments to the displaced; transfer provisions in the collective bargaining contract; and organized job-finding efforts by management, community, and union. Some of these aids are designed to help the workers directly; others may help the displaced workers indirectly. Let us look at each of these aids in turn.

Retraining

Where changes in technology are responsible for job displacement, retraining may be the most direct kind of aid for the workers. Two points should be noted in this connection. For what jobs are the workers being retrained? Retraining can be worth while only if the workers are trained for jobs that exist. To be effective, it must be based on an area skills survey to determine what jobs are available. Second, the retraining process today is different from the traditional types of retraining. Thirty years ago displaced workers could be trained for new jobs, using their old skills as a starting point. Today with the increasing use of automation, many skills are meaningless. The automated and semiautomated factories demand a set of skills which are more verbal and conceptual than manual. This means that the workers who have depended on manual skills for their livelihood will find that a lack of basic education may exclude them from chances for retraining.

Retraining as a solution to job displacement has not been emphasized in the research to date. It is difficult to ascertain whether retraining has played much of a role in the adjustment to job displacement. In two notable examples of technological displacement that have been studied—the mechanization of clothes cutting and of cigarmaking—no retraining program was planned for the displaced workers (10); (4). In the cigar industry, the introduction of machine cigarmaking provided new jobs for women. The displaced men were not considered for the mechanized operations since women were thought to be more adept at machine work.

The most detailed information available concerning the effect of retraining on displaced workers is contained in the study of ex-Armour Company workers in Oklahoma City in 1961 (16). Of the 431 former production workers who were invited to be tested and counseled for a retraining program negotiated by the union with the Armour Company, 210 visited the state employment service for testing. Sixty of the tested

workers were recommended for retraining, and fifty of them completed their special training by February 1961. Age was not a factor; Negroes and women were the most eager to receive training.

In the early spring of 1962, 41 of these retrained workers were interviewed again to determine the effect of retraining (15). The results were not encouraging. Forty-six percent of the 41 retrained workers were unemployed at that time, compared with 34 percent of the 381 displaced workers who had received no retraining or who had not completed the program. The unemployment rate for retrained workers under age 45 was 37 percent and for those aged 45 or over, 54 percent. All but one of the men under age 45, however, had jobs. Among the 22 retrained individuals who were working in the spring of 1962, only 4 of the 12 younger workers and 2 of the 10 older workers had jobs which appeared to be related to their retraining.

On the surface, the results of the retraining program appear to be poor. Lack of education and lack of skill among ex-Armour workers made them poor candidates for retraining. Among those who finished the course, there were a number of hard-to-place Negro and female workers. The training was of relatively short duration, and job opportunities in Oklahoma City were scarce. These factors make it difficult to pass judgment on the program. Actually, we must conclude that since very little is known about the effects of retraining on displaced workers, further research is certainly indicated.

Severance Pay

In some cases, the displaced worker is indemnified for his forced separation from work. The union contract may stipulate severance pay in addition to any income that the company owes an employee.[1] Severance payments can aid the displaced worker's reemployment opportunities in several ways. The money may be used to pay for training to make him more employable. Or the worker may use the money to finance his move to another geographical area where jobs are more plentiful. In other cases, he may use the money to pay private employment agency fees or to open a business for himself. What effect does severance pay actually have on reemployment?

Proposition: *Severance pay is used by the displaced workers to soften the financial burdens of job displacement rather than to aid in finding new jobs.*

[1]This is the general rule, but in Oklahoma City, ex-Armour workers who received severance pay were considered to have added income (16). This ruling from the state court made it impossible for them to draw unemployment insurance.

Severance payments to displaced workers have been reported in a number of studies—Robert J. Myers (10); Clague, Couper, and Bakke (2); Adams and Aronson (1); Wilcock and Franke (17); Ferman (5). The findings in these studies indicate that severance pay does not play a major role in reemployment. Robert J. Myers (10) reported that the ex-cutters who worked at Hart, Schaffner, and Marx were offered dismissal pay of $500 if they would volunteer to leave employment and waive their seniority rights at the company. It was thought that the paidoff workers would fare better in the job market than workers who were not given dismissal pay. The data indicated that the paidoff workers were no better adjusted to job displacement than those workers who did not receive such pay. At the time of the survey, about the same proportion of workers in each group was unemployed. Voluntary withdrawal from work with a lump sum of money did not prove to be an advantage in finding new jobs.

Clague and his associates (2) noted that dismissal pay to ex-rubber company workers in New Haven did not diminish their aggressiveness in looking for work. These workers found jobs as often as workers who did not receive dismissal pay. The workers, however, who used this money to go into business for themselves fared poorly. The dismissal pay did not facilitate reemployment; nor did it hinder it.

On the other hand, severance payments might have been a retarding factor in reemployment among ex-newspaper workers in Detroit. Workers who received the payments seemed less aware of the difficulties in finding jobs, were more leisurely in looking for work, and were more particular in the jobs that they sought. Some hesitated to seek jobs for fear that the severance pay would be taxable and that wages from jobs would raise them into a new tax bracket (5).

It seems clear that when severance pay is given, it is used mainly to relieve the financial burdens of unemployment. The severance pay received by ex-newspaper workers in Detroit (5), by ex-rubber workers in New Haven (2), and by ex-meat-packing workers in three cities (17) was used as disposable income to maintain existing standards of living. Although these payments helped to make up for the loss of wages, they were not equal to the loss of income caused by the job displacement. In only a few cases was this money invested in job retraining and travel expenses to explore other job markets.

Transfers to Other Jobs

Where the company has a number of plants or operations, the displaced workers may be aided in adjusting to their job loss by being trans-

ferred to new jobs. Of course, where the company ceases all of its operations, such a solution to job displacement does not exist. Transfers may involve downgrading in skill; reduction in wages; or, in the case of a transfer to another plant, a loss of seniority rights.

Two facts stand out about job transfers as an aid in the adjustment to job displacement: (1) the supervisory and skilled workers are more likely than other workers to be offered job transfers; and (2) displaced workers will accept tranfers more readily if the new jobs are within the same geographical area as their old jobs. In the study of ex-Harvester employees in Auburn, New York, less than two percent of the displaced workers were transferred to other Harvester plants, and most of these were in supervisory or skilled classifications (1). Displaced workers from the Bridgeport Brass Company in Adrian, Michigan, found that they were offered few opportunities to transfer to other plants of the company; where transfers did take place, these were limited to supervisory and skilled workers (6). Contract provisions between the United Automobile Workers and the parent Curtis Wright Company made it possible for some ex-Packard Company workers to transfer to jobs in a neighboring installation near Detroit, but these transfers involved only 18 percent of the displaced workers. In this case, strict medical requirements in the new plant made it impossible for the majority of the older workers to qualify for job transfers (12).

In his testimony before the House of Representatives Subcommittee on Unemployment and the Impact of Automation on April 17, 1961, Malcolm L. Denise, Vice President of the Ford Motor Company, reviewed the part played by job transfers in providing new jobs for displaced Ford workers in 10 different cases of job displacement.[2] Geography, type of operation, volume of operation, and labor market conditions were among the factors which differed from case to case. In spite of the fact that all workers were offered job transfers to Ford operations elsewhere, the proportion of displaced workers who accepted the offers varied from one situation to another. Some trends are discernible.

1. Displaced workers who have to move from their immediate community are less likely to accept job transfers. Only 15 percent of the displaced workers at the Somerville, Massachusetts, plant accepted transfer jobs to Lorain, Ohio, and Mahwah, New Jersey.
2. Given the choice between immediately transferring to jobs in an-

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[2]U. S. Congress, House, Committee on Education and Labor, Hearings before Subcommittee on Unemployment and the Impact of Automation, 87th Cong., 1st sess. (Washington: Government Printing Office, 1961), pp. 522-23.

other community and waiting for job openings in their home community, displaced workers follow the latter course of action. Three percent of ex-Ford workers in the Highland Park, Michigan, plant chose to transfer to Louisville, Kentucky, while the remainder chose to wait for job openings in the Detroit area.

3. If job openings in a particular industry are limited in a community, the displaced workers accept job transfers even if the transfers involve moving. Forty-two percent of ex-Ford workers from the Memphis, Tennessee, plant chose to transfer to Ford plants in Lorain and Cincinnati, Ohio.

Studies show that job transfers are a factor in providing reemployment in some cases of job displacement. Where they are available, they tend to be offered to specialized workers. Whether job transfers help the recovery of displaced workers depends on their willingness to move, the travel allowance granted, the actual job opportunity offered, and the availability of comparable jobs in their own community.

Organized Job-Finding Efforts

What part, if any, is played by organized community efforts in finding jobs for displaced workers? The data on this topic are quite limited, and the phenomenon itself has not been analyzed extensively. Two purposes are served by such efforts: (1) to find jobs for displaced workers through a planned publicity campaign; and (2) to give psychological support to displaced workers through community awareness of their problems.

Proposition: *Organized community efforts to find jobs for displaced workers are generally unsuccessful.*

Clague, Couper, and Bakke (2) reported that a cooperative job-finding campaign was conducted in Hartford following the closing of the rubber tire plant. Company and community officials worked together. Job resume forms were completed by the company personnel department and distributed to all the leading manufacturers in the city. Newspaper appeals described the plight of the displaced workers. Local contracting and utility firms promised to give the displaced workers preference in hiring. The drive was carried on with a great deal of enthusiasm, and many workers were undoubtedly placed by job leads resulting from this campaign; however, the proportion of workers who found jobs was no higher than in New Haven where no such campaign was conducted following the closing of the rubber footwear company. The workers in New Haven were displaced in a labor market where job opportunities still

existed. The displaced workers in Hartford became unemployed in a labor market already marked by high unemployment, and organized community efforts could not change these conditions.

Organized community efforts on behalf of the ex-Harvester workers were also apparent in the Auburn, New York, situation (1). However, the main emphasis in this campaign was not so much on soliciting jobs for the displaced as on (1) persuading the International Harvester management to keep operating the plant in Auburn; (2) bringing the plight of the community to the attention of the state and federal officials; and (3) recruiting new industry for the community. The management attempted to soften the impact of the shutdown: it announced the prospective closing 18 months in advance, assisted the workers in finding new jobs, and sold the plant to a citizens' committee for $1 to facilitate bringing new industry into the community. These company efforts were helpful in giving the workers time to adjust to the impending shutdown and to explore new job opportunities while they were still employed. Most important, the entire work force was not pushed into the labor market at the same time. As in the case of the Hartford study (2), it is difficult to assess the influence of community efforts on behalf of the displaced workers. New industry did move into the community, and defense contracts supplied needed work. Undoubtedly, these developments were partly the result of organized community efforts. However, the success in Auburn may also be attributable to the generally good economic conditions in the area at that time and increased government spending due to the Korean War.

In Adrian, Michigan, an intensive community campaign was undertaken to find jobs for workers displaced after the shutdown of the Bridgeport Brass Company (6). The unions, management, and civic officials cooperated in preparing work resumes on the workers and distributing them to manufacturers in the area. The workers were prepared for the shutdown at least 10 months before layoffs began, and the company permitted the workers to be interviewed on company time for prospective jobs elsewhere. Extensive publicity was given to the plight of the workers by both newspapers and radio. No attempt was made to evaluate this program, but a considerable number of workers failed to find new jobs in the year following the shutdown. Since the shutdown occurred in a depressed labor market, this condition affected job opportunities more than the organized community efforts.

In 1960, shortly after the closing of the *Detroit Times,* the Newspaper Guild of Detroit worked cooperatively with the state employment service

to find jobs for the displaced editorial and commercial workers (5). Resumes were prepared on the workers and distributed throughout the community. Newspaper and journal ads were placed. Newspaper editors from outside the city were invited to interview prospective employees. These displaced workers received very close attention from the state employment service. The campaign had some success, but apparently did not result in a high rate of job placements. Several reasons may account for this. First, the workers were displaced suddenly without any preparation. This meant that the job campaign had to be organized hastily. A second factor was the lower wages offered by out-of-state newspapers. Undoubtedly many workers could have obtained jobs if they had been willing to move from Detroit and take lower wages. While the campaign did turn up some job possibilities, these were rejected by most of the workers. Misinformation in the press gave the impression that the workers were almost all hired, and public apathy followed. Finally, the workers were displaced at a time when Detroit was characterized by a depressed labor market and the number of available newspaper and related office, communications, and printing jobs were decreasing.

It is difficult to evaluate the success of these community efforts. Some of them failed through poor organization, but others failed for two additional reasons: (1) community resources were mobilized around the problem for too short a time; and (2) few new jobs were available in the labor market when job displacements occurred. In the organized campaigns, it was difficult to sustain community interest in a particular group of displaced workers because of the general unemployment problem. In such cases, the problems of the displaced workers were seen by the public in the broader context of general unemployment. The conclusion may be reached that no special program is necessary—that general unemployment relief measures will take care of the displaced workers.

III. Job Hunting and Mobility Among Displaced Workers

The paramount concern of displaced workers is finding new jobs. This chapter reviews some of the findings on job hunting and the types of mobility patterns which characterize the successful job seekers. Job hunting has been the central focus of a number of studies in job displacement, and some of the findings have been quite well substantiated. The findings on labor mobility, on the other hand, show considerable variation from study to study, reflecting the different potentials of labor markets to make new jobs available for the displaced.

Finding a Job

The displaced workers' ability to find new jobs is influenced by conditions in the labor market, by their access to information about job openings, and by certain of their status and personal characteristics (e.g., skill, age, race, and sex). Depending on the nature of the job separation, some workers who have knowledge of the coming shutdown make an extensive search in the job market before the plant actually closes while other workers make a more restricted exploration. The extent of the pre-shutdown exploration of the job market will depend on how far in advance notice is given. The ex-newspaper workers studied by Ferman (5) in Detroit were notified by telegram at about 3 a.m., not to report for work that morning. They were forced to enter the labor market without any advance knowledge of possible job openings.

Sources of Job Leads

In looking for new jobs, the displaced workers may follow two different kinds of job leads. First, there are the job leads given by formal referrals —the state employment service, private employment agencies, the union, or the former employer. These formal referrals involve the placement of the workers into jobs through a set of systematized procedures used by the agency. The workers are required to fill out a set of forms asking for detailed information on their work history and employment potential. The referrals are made on the basis of this information. In contrast to these formal sources of job leads, the displaced workers may also seek jobs using informal sources of job leads. These include direct solicitation

by a prospective employer and information supplied by friends or relatives. It might seem that these methods would depend largely on chance factors, while official referrals would be a more rational means of guiding the workers to new job opportunities.

Proposition: *Most displaced workers obtain new jobs through informal rather than formal methods of job hunting.*

This proposition has been well substantiated in a number of studies. In his 1929 study of reemployment in three major labor markets, Lubin (8) reported that 82 percent of the new jobs found by workers resulted from job leads supplied by friends and relatives, by random applications for jobs, and by employer solicitation. In more recent studies, the findings agree that three-fourths or more of the reemployed workers found jobs using these informal methods of job hunting—Myers and Shultz (9); Adams and Aronson (1); Sheppard, Ferman, and Faber (12); Ferman and Hudson (6); Wilcock and Franke (17).

Two exceptions to this high proportion are to be noted. In the study of ex-newspaper workers in Detroit, Ferman (5) reported that because a larger percentage of skilled craftsmen were placed in jobs through their unions, a slightly lower proportion of workers obtained jobs from informal leads. In the study of ex-Ford workers in Buffalo, New York, the transfer provision in the union contract resulted in a number of jobs (7). In both of these cases, however, the proportion of workers getting jobs from informal leads was still higher than 50 percent. There seems to be no dobut that regardless of the region and industry involved and the occupation of the workers, informal sources of job leads are more important than formal sources in finding jobs.

Job Placement Through State Employment Service and Private Agencies

How frequently do displaced workers obtain successful job leads through the state employment service? What role, if any, is played by private employment agencies in providing successful job leads to displaced workers? The answer to these questions would give us some idea of the extent to which the labor market is rationally organized for these workers. A low rate of successful referrals by these agencies might suggest that job finding for displaced workers is unsystematized and depends mainly on chance factors.

Proposition: *The state employment service and private employment agencies play a minor role in finding jobs for displaced workers.*

The research findings show widespread agreement that few successful job leads are furnished by the state employment service—Myers and

Shultz (9); Adams and Aronson (1); Sheppard, Ferman, and Faber (12); Ferman and Hudson (6); Ferman (5); Wilcock and Franke (17). All of these investigators reported that seven percent or less of the new jobs resulted from leads supplied by the state employment service.

In only one study did the proportion of jobs resulting from state employment office referrals exceed seven percent. The study of ex-Autolite workers in LaCrosse, Wisconsin, showed that 24 percent of the reemployed workers found jobs acting on leads supplied by the state employment service (18).

These findings should be regarded with a note of caution. The source of the job referrals usually depends on the verbal reports of the respondents. In many cases, the respondent is unable to separate out the various referral agencies which have helped in getting him a job, and he may underplay the role of the state employment service. This possibility is strongly suggested by the study of ex-Autolite workers in Wisconsin where a check of state employment records showed that a high proportion of their referrals had been successful (18). Reporting by investigators may also give a false picture of the services rendered by the state agencies. Investigators usually identify only the workers who obtained fruitful job leads. We may assume that a higher proportion of displaced workers seek job leads from the state employment service than the studies indicate. It should also be taken into consideration that, in the majority of the studies reviewed, the labor market was depressed. In a depressed labor market, it is difficult to see how the state employment service can carry the major responsibility in job placement.

While the public employment service seems to play a nominal role in finding jobs for workers displaced by technological change or for other reasons, its contribution is, nevertheless, important. It is involved in finding jobs for workers who are generally unskilled and undereducated, thus making job placement more difficult than for the general run of the labor force. These workers are most in need of help in finding jobs and are less able to help themselves. Success with even a small proportion of these workers could be regarded as a real achievement.

The role of private employment agencies in finding jobs for displaced workers is unclear. The available evidence suggests that these agencies are no more effective than public agencies in supplying successful job leads—Myers and Shultz (9); Adams and Aronson (1); Ferman and Hudson (6); Ferman (5). While it may be supposed that private agencies have considerable acceptance among white-collar workers, only five percent of the reemployed white-collar newspaper workers in a Detroit study

used private agencies for job leads (5). Very little is known about the role of the private employment agencies in organizing the labor market for workers in general. Certainly more research is needed on their role in helping displaced workers.

Length of Unemployment

If displaced workers are jobless for a long period of time, they will have to face the problems of declining savings, added debts, and lack of adequate income to meet everyday needs. Workers who have been regularly employed can usually weather a relatively short period of unemployment. Most of them are protected against the hardships of short-term unemployment by savings and unemployment insurance. These sources of expendable cash do not compensate the worker for his loss of regular income from a job. It is to his advantage to become reemployed as rapidly as possible.

Proposition: *The number of reemployed workers who find jobs within a relatively short period after job termination depends upon circumstances and labor market conditions.*

Decline in demand for a particular skill is often a factor in the reabsorption of displaced workers in a labor market. The ex-cigar workers in Manchester, New Hampshire, studied by Creamer and Swackhamer (4) and the ex-clothing workers in Chicago, studied by Robert J. Myers (10), sought jobs at a time when their specialized skills were being replaced by machine processes. While production increased in both instances, job opportunities decreased. Another factor often affecting the reemployment of displaced workers is the condition of the local labor market. In a depressed labor market, a long period of unemployment may be inevitable. In an expanding labor market, a plenitude of jobs may offer the displaced workers immediate reemployment.

What proportion of the workers find reemployment within one month? Low proportions of immediate reemployment among workers who found jobs were reported by Lubin in his study of reemployment in three labor markets (8); by Creamer and Swackhamer in their study of ex-cigar workers in Manchester, New Hampshire (4); and by Wilcock and Franke in their study of meat packing plants in three cities (17). In these studies about one reemployed worker out of every ten had a job within one month after the shutdown. High rates of immediate reemployment among displaced workers who found jobs were reported by Clague and his associates (2) in New Haven and Hartford (62 percent and 57 percent); by Ferman (5) in his Detroit study of ex-newspaper workers (58 percent);

and by Myers and Shultz (9) in their textile study in Nashua, New Hampshire (82 percent of those who quit the job and 65 percent of those who were involuntarily terminated when the plant shut down). Other investigators have found rates in between these extremes—Palmer and Williams (11); Creamer and Coulter (3); Fowler and Smith (7). The overall impression is that there is great variation among studies depending not only on the circumstances or the situation studied but also on the time and length of the study period.

Nature of New Jobs

The workers look for and expect to find permanent jobs that they can depend on for some time to come. They are in competition with each other at a time when the labor market may be depressed. Are the jobs they find permanent or temporary?

Proposition: *Many of the new jobs found by displaced workers are apt to be temporary and of short duration.*

Observations of displaced workers show that new jobs are likely to be temporary and of short duration. Sheppard and his associates reported that among ex-Packard workers, 17 percent of one sample and 34 percent of another sample became unemployed again after finding a new job (12). Clague, Couper, and Bakke reported that 43 percent of the reemployed workers in the Hartford sample and 54 percent of the reemployed workers in the New Haven sample lost their new jobs by the time of the interview (2). Ferman reported in his study of ex-newspaper workers in Detroit that there was a 19 percent decline in new job holders by the end of the 6-month study period (5). These data indicate that finding a job did not mean holding it.

There is further evidence to support this proposition. Over half of the ex-Bridgeport Brass workers who were reemployed had more than one job in the 18 months following the shutdown (6). Similar findings were reported by Robert J. Myers in his study of ex-cutters in the clothing industry in Chicago (10) and by Adams and Aronson in the Auburn study of ex-Harvester workers (1). Several factors account for this mobility. In most of the studies, the displaced workers sought and found jobs in a depressed labor market. Their new jobs were not protected by seniority and, if economic conditions grew worse, their jobs were the most likely ones to be terminated. In a depressed labor market, the displaced workers are likely to take the first jobs that come along. They may decide that their choices are poor and seek new work. In addition, many of the older and unskilled workers may be forced to take temporary employment for

lack of better job offers. Undoubtedly, all of these factors contribute to the high turnover of jobs during the recovery period.

Knowledge of Wages and Working Conditions

A recurring controversy in the study of displaced workers focuses on how these workers organize their efforts to find new jobs. The random pattern of job seeking shown in a number of studies suggests that many displaced workers do not make a systematic search for jobs when they become unemployed. Central to this problem of organized job seeking is the amount of knowledge that workers have about wages and working conditions on prospective jobs.

Proposition: *Displaced workers frequently have some knowledge of wages and working conditions before taking new jobs.*

In the Nashua study reported by Myers and Shultz (9), nearly half of the employed workers in one sample and 70 percent in the second sample had fairly specific job information about their new jobs prior to being hired. Only 10 percent of the reemployed workers knew nothing about the conditions on the new job. In the Auburn study, displaced workers had more knowledge about job conditions and wages on prospective jobs than workers in the general labor force. About 75 percent of the reemployed Harvester workers knew the kind of work involved; and 70 percent knew the wage rates, working conditions, and approximate steadiness of employment (1). The data on ex-Packard workers show approximately the same distribution (12). These displaced workers, then, knew about the essential features of the job before they were hired.

These findings suggest that informal sources of job leads, reported above, may also give the worker firsthand knowledge of employment conditions and wages on prospective jobs. The relative or friend who knows of a job opening is also likely to know about the wages and physical conditions of the work, as well as how the boss treats the help. In many cases, the friend or relative may be or may have been employed at the suggested place. In other cases, the displaced worker may take a job that he held before and is thus likely to have firsthand knowledge of the wages and working conditions. Even if informal methods of job hunting are not efficient, the information obtained by these methods may be essential in the rational adaptation of the worker to the job market. It is doubtful whether formal sources of job leads could supply the intimate and personal information about a job that the worker gains from his contacts with former employers, friends, and relatives.

Mobility of Displaced Workers

Students of the labor market have long been interested in the mobility patterns of displaced workers. To understand the strains and adjustments of a labor market, the theorist must have some knowledge of where the displaced workers look for and find jobs. These data permit predictions regarding the behavior of displaced workers and their potential reabsorption into the economy. The planner of public policy may gain some insight into retraining needs if he knows which skills are transferable and which industries can absorb the displaced. He can obtain this information by studying the mobility patterns of workers who have been displaced.

Labor mobility among displaced workers may be measured in a number of ways. We may study the number of status changes that workers make, e.g., how many skilled workers become unskilled workers; how many workers become self-employed; etc. We may also study the magnitude of wage changes to see whether the reemployed workers gain or lose income in their new jobs. Occupational or industry shifts may be examined. Finally, we may note the frequency of changing jobs during a given period of time.

Consideration of labor mobility usually involves the investigation of related problems. How satisfied were workers with their previous jobs? Do they have an inclination to seek new jobs, and if so, where will they look? What geographical shifts are involved in labor mobility? These questions are equally important for the prediction of the labor market behavior of displaced workers.

Industry Change

Reemployment for the displaced workers can involve an industry change. This is particularly true if the industry in which they worked is depressed and has few job opportunities. A change in industry may offer a number of difficulties for the workers if the production methods and work pace are radically different in the new industry, requiring a whole new set of work skills. On the other hand, difficulties may be minimal if the workers change to an industry where many of the skills of their previous jobs can be utilized.

Proposition: *Displaced workers are frequently required to make an industry change when taking a new job.*

Considerable variation exists in the potential of displaced worker groups to find reemployment within the same industry. Reemployment

was not readily available for displaced workers in textile,[1] rubber, automobile, steel car manufacturing, heavy machinery, and meat packing—Robert J. Myers (10); Clague Couper, and Bakke (2); Creamer and Coulter (3); Myers and Shultz (9); Adams and Aronson (1); Sheppard and Stern (13); Wilcock (14); Sheppard, Ferman, and Faber (12); Wilcock and Franke (17). Only 13 percent of the reemployed ex-Armour workers (17) and 11 percent of the reemployed workers in the Mt. Vernon study (14) found jobs in their old industrial classification. The mass production industries are prone to continuous rationalization and mechanization where less skilled and less educated workers are displaced by new automatic machine processes requiring skilled operators. Without some retraining, frequently difficult for unskilled or semiskilled industrial workers to obtain, these workers cannot easily reenter the industry.

Ferman (5) reported that 80 percent of the reemployed newspaper workers in his sample were working in the communications industry, and Creamer and Swackhamer (4) reported that half of the reemployed ex-cigar workers at the R. G. Sullivan Company were reemployed in cigar manufacturing either by finding a job in another company or by opening small establishments of their own. Unusual situational factors rather than a high potential of the industry to absorb the displaced workers were involved in these two cases. The ex-newspaper workers in Detroit were aided in obtaining jobs on newspapers by the circulation war and the temporary expansion of printing facilities that occurred in the post-shutdown period. In both of these groups there were specialized workers with a high level of skill, and they undoubtedly had a strong attachment to their industry.

Movement of a plant to another location is another consideration. Within a small community there may be only a few plants in the same industrial classification. Moving even one of these plants would sharply reduce job opportunities in the industry if the displaced workers continue to reside in the area. Such was the case when the two rubber processing plants left New Haven and Hartford in the late twenties, reducing reemployment opportunities in the rubber industry for workers remaining in these cities (2).

The potential of an industry to reabsorb displaced workers is limited by the degree of mechanization occurring in that industry, the availability

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[1]One exception is to be noted. Myers and Shultz (9) reported that 68 percent of one group of reemployed textile workers found jobs in the textile industry in Nashua. These jobs became available when two new companies began operations in the area. This appears to be the exception to the general findings.

of retraining opportunities, and the number of plants in that industrial classification in the immediate labor market.

Self-Employment

One possible solution to the problem of job displacement is self-employment. This may take different forms. Some specialized workers (e.g., machinists or photographers) may open up their own businesses and solicit orders. On the other hand, the commercial artist, the newspaper writer, and the designer may contract their services out on a "freelance" basis without any business organization of their own. Another possibility is saleswork on a commission basis without formal employment by a company.

Proposition: *Displaced workers become self-employed only in special instances.*

The data relating to this proposition are limited, but the existing evidence indicates that self-employment as an adjustment to job loss rarely occurs—Robert J. Myers (10); Clague, Couper, and Bakke (2); Sheppard, Ferman, and Faber (12); Ferman (5). About five percent of the reemployed cutters studied by Myers (10) opened their own tailor shops; most preferred to work for others. Among the reemployed ex-newspaper workers studied by Ferman (5), only two percent became self-employed, making use of particular skills to do so.[2]

Two exceptions to this finding are displaced workers who owned farms and cigar workers who used their severance pay to open small cigar manufacturing shops. Wilcock reported that 22 percent of the reemployed workers in his sample were working on their farms after the shutdown in Mt. Vernon, Illinois (14). Almost 40 percent of the reemployed cigar workers in Manchester, New Hampshire, opened small shops to make cigars (4).

Self-employment following job loss is rare among less skilled industrial workers since they usually have no special business aptitude. In many cases, the necessary funds are also lacking.

Skill Level

In a dynamic and changing technological system, changes in occupational specialty and skill level are quite common. New jobs are continually being developed, and old jobs are often eliminated. This means that the number of jobs at a given skill level will vary over a period of time. Consequently, if displaced workers desire to work in a given occupation, some will be forced to accept jobs at a different skill level.

[2]Writing, photographic work, public relations, sales.

Proposition: *The majority of displaced workers retain the same skill level or are upgraded when taking new jobs.*

The majority of the reemployed workers find jobs at the same skill level —Myers and Shultz (9); Adams and Aronson (1); Fowler and Smith (7); Sheppard, Ferman, and Faber (12). Some upgrading in jobs occurred among the reemployed—1 worker in 10 took a job at a higher skill level—Clague, Couper, and Bakke (2); Myers and Shultz (9); Adams and Aronson (1); Sheppard, Ferman, and Faber (12).

Available data indicate that about two out of every five reemployed workers are downgraded in skill level in taking new jobs. Clague and his associates (2) reported a high percentage of downgrading in the study of the ex-Candee Company workers in New Haven. Over half of these reemployed workers held jobs at a lower skill level.

Separation from work always involves some loss for displaced workers. It means the loss of their accumulated seniority rights and job protection, and their place in the skill hierarchy which governs promotions. Workers who are reemployed at the same skill level and even those who are upgraded have taken a step backward.

Occupational Change

Displaced workers who seek new jobs may find it necessary to change their occupations. Occupational change can vary independently from change in skill level. Thus, workers who have operated a drill press in an automobile factory and now work on a tanning machine in a leather goods factory have made an occupational change while still retaining their semiskilled status. It is quite common, however, for workers to experience occupational and skill changes simultaneously.

Proposition: *Many displaced workers must make an occupational change when taking a new job.*

The evidence from the reviewed studies substantiates this proposition. Robert J. Myers reported that one reemployed worker out of five had a new occupational title after the Hart, Schaffner, and Marx shutdown (10). Sheppard and his associates reported the same ratio among reemployed ex-Packard workers (12). Other investigators reported that about half of the reemployed workers in their samples changed their occupational titles[3]—Lubin (8); Palmer and Williams (11); Creamer and Swackhamer (4); Adams and Aronson (1). The necessity for changing occupations may be twofold. First, if the worker desires reemployment in a particular industry, he may find that an occupational change is necessary

[3]Job classifications used are those in the *Dictionary of Occupational Titles.*

if he is to achieve his goal. The worker who was a salad man in one restaurant may have to become a dishwasher in another if he desires to stay in the restaurant trade. Second, a worker may find that his former occupation no longer exists due to technological changes in the production process. If he wants to be reemployed in the same industry, an occupational change may be necessary. In both cases, the worker who is a jack of all trades has the advantage over a person with a narrow occupational specialty.

Changes in Wages

Displaced workers may also experience changes in earnings when they take new jobs. These changes may mean either higher or lower income for the workers, depending on the wage scale, the availability of overtime, and the steadiness of employment. We would expect that craft workers would be less likely than semiskilled or unskilled workers to experience downgrading in wages, since their wages are more standardized from job to job.

Proposition: *Many displaced workers receive reduced wages in taking new jobs.*

The evidence seems clear that a considerable number of displaced workers take wage cuts in their new jobs. Two investigations have shown that 9 out of every 10 reemployed workers experienced a reduction in wages when they took new jobs—Clague, Couper, and Bakke (2); Wilcock and Franke (16). In the first study, the displaced workers were in a tire manufacturing company in Hartford; in the second study, the workers were in a meat packing and processing plant in Oklahoma City, Oklahoma. In the former case, the rubber workers lost their jobs in a labor market where considerable job displacement had already occurred and where the only available jobs paid less than previous ones. In Oklahoma City the displaced packinghouse workers, most of whom were Negroes, were unskilled and uneducated. They experienced considerable difficulty in getting new jobs which paid them the wage rates which they had received under the union contract between the Armour Company and the United Packinghouse Workers Union of America.

Other investigators have reported that almost half of the reemployed workers in their samples had reduced earnings on the new job—Robert J. Myers (10); Lubin (8); Fowler and Smith (7); Wisconsin State Employment Service (18). About one-third of the reemployed ex-Harvester workers (1) and ex-workers from the *Detroit Times* (5) had reduced earnings. These reduced earnings were reported for the job held at the time of the interview. For some of the workers, it was the second or third

job which they had held during the recovery period.[4] For a period of time after the shutdown, a considerable number of displaced workers were unable to receive earnings comparable to those on their old jobs.[5] Financial recovery among displaced workers is a slow process.

Reduced earnings come about for a variety of reasons. These are the most important:

1. The companies most likely to be the victims of technological progress are old companies with employees who have a long period of service. As a result of length of service with the company, these employees are at a high earnings level; and subsequent jobs are not apt to offer comparable wage rates.
2. The less fortunate of the displaced workers—the less educated, the less skilled, the minority group members—worry more about unemployment than about reduced earnings. In looking for work, they do not conduct an exhaustive search: they often take the first job that comes along.
3. Job displacement usually occurs in a depressed labor market where wages are also depressed.
4. Changes in occupation, industry, and skill level—any or all of which characterize the new job of the reemployed—generally bring reduced earnings.
5. Very often the workers are required to make changes from a union to a nonunion plant where the wage scale is generally lower.

Job Satisfaction

How satisfied are displaced workers with new jobs in comparison with former jobs? What is the basis of their evaluation? Job displacement may bring about changes not only in industrial classification, wages, occupation, and skill level but also in working conditions, job supervision, and inter-personal relationships at work. These changes will, to some extent, color the workers' evaluation of their new jobs. The extent to which the workers view their new jobs favorably or unfavorably is undoubtedly related to the possibility of changing jobs again.

Proposition: *Displaced workers who are reemployed usually consider these jobs to be less desirable than their old jobs.*

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[4] Myers and Shultz have used the "best job held" in the recovery period (9).

[5] Of course, the reemployed workers who were working at the same wages as on their old jobs must also be considered distressed cases. It is quite likely that if these workers had continued to be employed at the old jobs, their wages would have become higher by natural increases in earnings.

In comparing their new jobs to their pre-shutdown jobs, 40 percent of the reemployed ex-newspaper workers studied by Ferman in Detroit (5), 49 percent of the ex-meat-packers in three cities (17), and 66 percent of the ex-meat-packers in Oklahoma City (16) reported the new jobs to be less desirable. The specific question was: "How does your present job compare with your job at .....?" Wilcock, in his Mt. Vernon, Illinois, study (14) also reported a high percentage of reemployed workers who regarded their pre-shutdown jobs as better than their present jobs (73 percent). These workers justified their evaluation on the following basis: wages, nature of the work, and location or hours of the job.

Two investigations of job displacement showed findings at variance with the results of the studies cited above. Among reemployed ex-Harvester workers, 28 percent reported themselves to be "less satisfied" with their new jobs than with the old jobs, while 47 percent reported themselves to be "better satisfied" with their new jobs (1). Fowler and Smith reported that only one out of five reemployed Ford workers rated the new jobs less satisfactory than the old jobs (7). These findings reflected an expanding labor market, and do not invalidate the proposition. The Korean War brought an expansion of job opportunities to the Auburn, New York, area and probably some ex-Harvester workers found better working conditions and fringe benefits in these new jobs. Similarly, the ex-Ford workers studied by Fowler and Smith sought jobs in a labor market where work opportunities existed. Undoubtedly, many of these workers could and did choose jobs to better themselves.

Geographical Mobility

Does attachment to the community impede reemployment? We have already suggested that displaced workers with strong roots in the community may limit their search for jobs to the immediate geographical area and neglect looking for opportunities elsewhere. Strong community attachment may result from home ownership, number of friends, length of residence in the community, and the presence of schoolage children. Displaced workers may weigh the educational and social advantages of the community for their children against such advantages elsewhere. Very often, even in a depressed labor market, they may decide to remain in the community for the sake of their children.

Proposition: *Most displaced workers have a strong attachment to their communities, and little or no inclination toward looking for new jobs which would require them to move.*

In their studies of two plant shutdowns in New Haven and Hartford in

1929, Clague, Couper, and Bakke reported that home ownership was a factor influencing continued residence in the community in spite of the paucity of job opportunities (2). In the Mt. Vernon study, the most frequent reasons given by the unemployed workers for remaining in the depressed community were: family and friends, attachment to the hometown, and ownership of home or farm property (14). In the study of ex-Packard Motor Company workers in Detroit, only six percent of the sample had left the Detroit area by 1958 (12). It is significant that over two-thirds of the sample either owned or were buying their homes. In this group, age and length of residence in the community were undoubtedly factors influencing geographical immobility; over 50 percent of the sample were 55 years of age or older, and the median length of residence in the community was about 32 years.

In their study of ex-Ford workers in Buffalo, New York, Fowler and Smith made an extensive analysis of the characteristics of workers who remained in the community despite the company's standing offer of jobs at the new plant location in Lorain, Ohio (7). When interviewed, the ex-Ford workers gave the following reasons for not moving: social ties in Buffalo, 58 percent; lower standards of living in Lorain, 25 percent; the cost and trouble of moving, 19 percent; jobs and other economic resources in Buffalo, 17 percent; and no job security in Lorain, 14 percent.[6]

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[6]The displaced workers who were planning to move were found to be under the greatest economic pressure to move. They had the lowest skills, the least seniority, the fewest income opportunities in the local area, and the least optimism about obtaining other jobs in Buffalo as good as the ones previously held at Ford. They also had the fewest parental ties, and the fewest ties with relatives, fellow workers, neighbors, and other friends in the area. This was a younger group having the smallest percentage currently married and the greatest past history of physical mobility. Finally, this decision group had the lowest percentages (1) belonging to three or more social clubs; (2) voting in the last presidential election; and (3) taking part in the local charity fund drives.

Those who remained in Buffalo were found to be under the least economic pressure to move. They had the highest skills, the most seniority, the most local income opportunities, and the greatest optimism about finding new jobs in Buffalo as good as their Ford jobs. They had the strongest parental and personal ties in the area, and they belonged to more local clubs. This was an older group having the largest percentage currently married and the least past history of physical mobility. This decision group, finally, had the highest percentages (1) belonging to three or more social clubs; (2) voting in the last presidential election; and (3) taking part in the local charity fund drives.

The undecided, compared to the two decision groups, were found to be in a genuine dilemma situation, subject to a greater number of social and economic cross-pressures. They appeared to be exposed to a large number of personal, social, and economic considerations which pulled them in opposing directions. For example, workers who perceived better job opportunities in Lorain than in Buffalo and who had a high level of social participation in the community were undecided about moving. Over time, however, this group generally resolved these conflicts by deciding to remain in Buffalo.

In these studies community involvement proves to be a stronger influence than perceived job opportunities in the displaced workers' plans and circumscribes geographical mobility. Whether the decision to remain in a community where there are few jobs is rational depends on one's viewpoint. The adjustment of the displaced worker to job loss apparently involves more than just finding a job. Whether to remain in or leave the community is a decision affecting his wife, his children, and his relationships with people in the community. Will he remain with the pleasant and familiar or try the unknown? He may feel that the social support which he derives from his present community situation is worth the price of delayed reemployment. In his present community, he knows the social resources and agencies that are available to him. If he moves, these resources may not be available to support him if he should need them again.[7]

[7]The resistance shown by a displaced worker to taking a new job away from the local neighborhood and community is well known to personnel at the state employment service. If we consider that the displaced worker seeks not only a new job but also social and psychological support from a familiar social environment, his behavior becomes more understandable.

IV. The Economic and Noneconomic Consequences of Job Dislocation

Job dislocation has both economic and social consequences. The employment status of the displaced worker affects his savings, debts, and level of expenditures. It may also affect his relationship with the members of his family; his mental health, job aspirations, and social ideologies. The displaced worker must find a new job, usually in a labor market where jobs are scarce. Finding a job may involve moving his home, retraining, or possibly both. At the same time, he must provide his family with funds to meet the economic needs of everyday life. How he adjusts to this complex series of status changes and experiences may influence his life and the life of his family for years ahead.

Economic Consequences of Job Dislocation

In this section we shall discuss four of the economic adjustments that are required of the displaced worker. Does he find a job during the study period? What changes take place in his savings and what changes take place in his level of debt? Does he find it necessary to reduce his expenditures, and if so, in what areas? What proportion of the displaced workers seek public and private welfare aid?

Employment Following Job Displacement

Are displaced workers potential long-term unemployables? Do they become part of the hard core of the unemployed? The answers to these questions are important in formulating a program of community and public aid for these workers. If these workers remain permanently unemployed, they could be served by existing general relief programs for hard-core unemployment: no special program would be necessary. But if job displacement means the temporary loss of jobs, it is both necessary and advisable to develop a program of aid tailored to the particular problems of displaced workers.

Proposition: *Most of the displaced workers find new employment after job displacement.*

While some displaced workers may be underemployed for long periods of time and jobs may be temporary and of short duration, studies have shown that a large majority of displaced workers find jobs after a shutdown. It is difficult to compare the percentage of reemployed displaced

workers in one study with that in another study. The length of the investigation period differs widely between studies. A low proportion of reemployed workers in a 6-month study period and a high proportion in an 18-month study period may not be the result of differential job opportunities in the two labor markets which were observed, but rather a reflection of a longer recovery period in one study in contrast to a shorter recovery period in the other study. It is possible, however, to use such data to indicate the employment possibilities of workers over a period of time after the shutdown. Table 1 gives such information.

Table 1

Percent of Displaced Workers Employed During Study Period in 13 Studies of Job Displacement

Study[a]	Year Begun	Workers in Sample (number)	Time Between Job Loss and Interview (months)	Working at Some Time in Study Period (percent)
Robert J. Myers	1929	370	18	88
Lubin	1929	750	12	54
Clague *et al.*[b]	1929	1,206	11	97
Palmer and Williams	1936	673	30	98
Creamer and Coulter	1936	1,068	13-22	20
Myers and Shultz[c]	1948-49	150	10	31
Sheppard and Stern	1956	348	12	35
Wilcock	1956	1,539	30	78
Sheppard, Ferman, and Faber[c]	1957-58	314	24	79
Ferman and Hudson	1959	487	15	53
Wisconsin State Employment Service	1960	1,095	9	37
Ferman[c]	1960-61	232	6	80
Wilcock and Franke[d]	1960-61	1,920	12	60

[a]See appendix.
[b]New Haven and Hartford studies combined.
[c]Sample II used.
[d]Study of three cities, sample I.

These data indicate that sizable proportions of displaced workers found jobs after entering the labor market. In six of the samples, three-fourths or more of the displaced workers found some kind of work during the period covered by the studies—Robert J. Myers (10); Clague, Couper,

and Bakke (2); Palmer and Williams (11); Wilcock (14); Sheppard, Ferman, and Faber (12); Ferman (5). In three other samples, at least half of the job seekers found work—Lubin (8); Ferman and Hudson (6); Wilcock and Franke (17). This means that in 9 out of the 13 samples cited the majority of the workers were not long-term unemployables after the shutdown. It is likely that had the study period been extended in these investigations a still higher level of reemployment would have been apparent.

Four of the studies indicate that reemployment during the study period was low. Three of these investigations were conducted in depressed labor markets which had relatively few job opportunities. It is possible that if each research project had been extended to include a period when employment opportunities were available, the recovery picture might have been brighter. Reviewing the evidence, it would appear that large proportions of displaced workers find some work after job loss and do not become long-term unemployables.

Changes in Savings

Data concerning changes in savings are limited. Among ex-Packard workers in Detroit in 1957, 39 percent of the sample reported that they had less savings while 23 percent reported that they had more savings. In 1958, 47 percent of a second sample of ex-Packard workers who were interviewed reported that they had less savings while only 12 percent reported that they had more savings (12). In the study of ex-newspaper workers in Detroit, Ferman reported that only 12 percent of the respondents had experienced a decline in savings (5).

Displaced workers who have savings use this money together with unemployment compensation to make up for the loss of income. The use of savings occurs not only during the period of unemployment but frequently even after the displaced workers find new jobs since the income from their work may be insufficient to meet their past and present financial obligations.

Debts

Sheppard, Ferman, and Faber reported that 52 percent of the ex-Packard workers owed about the same amount as they did when they worked at the Packard Motor Company, and that 18 percent owed more. Only 19 percent indicated that they or someone in their family had to borrow money because they were out of work (12). Ferman reported that 10 percent of the ex-newspaper workers studied in Detroit had increased

the amount of their indebtedness after the shutdown (5). Since these two studies are the only ones reporting data on debts of displaced workers, the question of debt in relation to job displacement needs considerably more research.

Changes in Expenditures

In 1929 Clague, Couper, and Bakke reported that displaced workers suffered a loss of purchasing power (2). The total income for the displaced workers declined in the first three years after the New Haven shutdown. In 1928 the workers as a group received $352,989. In the three 12-month periods following the layoff, their total annual income was $252,711, $214,782, and $181,356, respectively. Annual income for the first 12-month period included dismissal pay, amounting to $35,440, which was completely expended during the first year following the shutdown.

The study of former Packard Company workers in Detroit also indicates that purchasing power declined among displaced workers (12). The interviewer asked: "While you were out of work, you were getting less money. That probably meant that you had to cut down on things. What sort of things did you have to spend less money on?" In response to this open-ended question, between 30 and 33 percent (depending on the sample cited), mentioned food as an item on which they were required to spend less money; about 35 percent mentioned clothing; and between 30 and 36 percent mentioned recreation, entertainment, and similar items. When the respondents were asked specifically about food and clothing, however, 60 percent of each sample said that food was one of the things they had to cut down on, while 74 to 80 percent said that they had to cut down on expenditures for clothing. Medical care was the item on which the displaced workers were least likely to cut down on.

These limited data suggest that job displacement affects the general economic welfare of the community because the displaced workers have less money to spend. The burden of job displacement falls upon many shoulders.

Use of Public and Private Welfare

When workers are left without income from jobs, they may utilize the resources of public and private welfare in their community. To what extent they use these services will depend on their circumstances, their familiarity with community resources, and their attitude toward receiving this kind of help.

Proposition: *Displaced workers rely more on their own resources than on public and private aid to meet the problem of job displacement.*

Few data are available on the use of public and private welfare aid by displaced workers. Clague and his associates reported that during the first year after the layoff, only nine ex-Candee Company workers in New Haven made use of welfare services for the first time in their lives (2). Fifty-one families of displaced workers were already getting some welfare aid prior to the shutdown. In the second year after the shutdown, 44 new families applied for aid; in the third year, another 47 families. Over the first 3 years, then, 151 of the 729 ex-Candee Company workers applied for aid—a little over 20 percent. Considering that the three-year period extended into the depression, this seems to be a rather small proportion. The main burden of adjusting to job displacement was apparently borne by the workers, aided by relatives and friends.

Clague, Couper, and Bakke confirm this by some suggestive data. In the three years after the shutdown, the workers made up 65.5 percent of the reduced income through their own efforts. During the second year, the proportion was 88.5 percent; and in the third year, the proportion was 86.0 percent. Bakke noted:

> In spite of the efforts of the community to bear the burden of unemployment through private contributions and taxes, the real "burden of unemployment" still rests upon the shoulders of the unemployed themselves. It is they who sustain the major shock, drastically curtail their expenditures, and readjust their standard of living in the face of the failure of the community's job supply. Whatever may be true of specific individuals, the workers as a group are not unloading their burden upon the community.[1]

Noneconomic Consequences of Job Dislocation

Job dislocation has noneconomic as well as economic implications for the displaced worker. An individual's main status in American society is occupational. He is evaluated by his friends and relatives and by the larger community in terms of the job that he holds and kind of work that he does. A change in his employment status may seriously affect his self-esteem and his relationships with significant persons in his social environment.

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[1]Ewan Clague *et al.*, *After the Shutdown* (New Haven: Yale University, 1934), p. 103.

In this section we shall briefly discuss two of the noneconomic consequences that job dislocation may have for the worker. These are (1) changes within the family, and (2) mental health.

Changes Within the Family

Job displacement is a family experience. When a worker is displaced, his spouse or children may enter the labor market.[2] This may cause a change in the self-esteem of certain family members. What do we know about changes in relationships within the families of displaced workers? Actually, we know very little. Such data can be obtained only through intensive clinical investigation of family relationships. In the past, job displacement research has not included this type of investigation, but some investigation is currently underway.[3] While it would be valuable to know something about the role of the extended family (e.g., parents, siblings, in-laws and others) in aiding the displaced worker, refined data on this question have been lacking to date.

Unpublished data from the study of ex-Packard Company workers in Detroit show that the displaced workers had contact with no fewer relatives after the shutdown than before the shutdown. Possibly this may indicate that the displaced workers retain their ties to their extended families in this period of crisis. Wilcock and Franke reported that the Armour Company shutdowns had a major impact on the wives who entered the labor force but not on other family members (17). Twenty-six percent of the wives of married men in the interview sample had worked before the shutdown and continued to do so. At least 28 percent more entered the labor force by looking for work after the shutdown; 20 percent of them found jobs in the post-layoff period. Fifteen percent started to work specifically to help out with the family budget. Cases of other family members going to work to help out were quite rare, although some teenage children did take part-time jobs while the chief wage earner of their family was out of work. While these data are suggestive, considerably more research will have to be carried out before we can assess the impact of job displacement on the family.

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[2]In 1948, the closing of coal mines in some Pennsylvania communities with consequent unemployment of the miners was met by considerable employment of miners' wives in needle trade companies. The men assumed charge of household duties and caring for the children.

[3]Professor Carl U. Smith, Psychology Department, University of Wisconsin, has initiated an investigation of the influence that the closing of the Autolite Plant in La Crosse, Wisconsin, had on the families of ex-Autolite workers.

Mental Health

Recognizing that the worker faces a problem in readjustment after job loss, what psychological and social factors are related to good or poor mental health? By mental health, we do not refer to the classical types of mental illness (e.g., schizophrenia) but rather to an attitudinal set toward life. This attitudinal set is most often called morale. What factors make it possible for a displaced worker to live hopefully and effectively? What psychological and social influences make him feel that life is worth living and that his personal and social ideals are worth striving for? The answers to these questions have a definite relevance to his behavior in the labor market. The state of his mental health can affect his ability to organize his efforts in job seeking and to sustain his spirits in the face of discouraging experiences.

To date, mental health data are available only for ex-Packard Motor Company workers in Detroit.[4] Some of the findings on the relationship between mental health and job displacement may be summarized as follows. Mental health, as measured by a morale score, was related to situational variables.[5] Displaced workers who owned their homes, or who had savings, a trade, and alternate sources of income had higher morale scores than other displaced workers. This may indicate that workers who have a sense of economic security are less likely to be in poor spirits following job displacement. Perhaps workers who plan ahead and organize their lives, as evidenced by their current economic well-being, have a personality type that permits them to deal with job displacement problems with a minimum of emotional upset. Reemployed workers who had experienced job downgrading had lower morale scores than workers who were still unemployed and workers who were reemployed at the same or a higher skill level. This finding suggests that "skidding," a downward job-status change, may be more damaging to the self-esteem and morale of workers than the sheer fact of being unemployed a short period of time. A longer period of time than that covered in the study might show lower morale among the unemployed.

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[4]These data are being analyzed and prepared for publication by Louis Ferman.

[5]The morale score was composed of the following five items:

1. On the whole, how satisfied are you with your way of life today?
2. How often do you get the feeling that your life is not useful?
3. How often do you get upset by the things that happen in your day-to-day living?
4. How often do you wish you had the chance to live your life over?
5. How much do you plan ahead the things that you will be doing next week, or the week after?

These data suggest a definite process in the adjustment of workers to job displacement. Age, skill level, and education are factors that influence the length of unemployment and the stability of reemployment. The length of unemployment and the stability of reemployment are related to the degree of economic deprivation—increase in debt, decrease in savings, and the curtailing of expenditures. The degree of economic deprivation in turn influences the morale of the workers and their social participation.

These data indicate an interdependence between a worker's economic well-being and his emotional state. The relevance of such data in predicting the adjustment of workers to job displacement should be carefully explored in further research.

V. Suggestions for Further Research

Research on job displacement has yielded considerable data on how workers adjust to the loss of jobs and how different labor markets and industries go about absorbing the displaced workers. We have been concerned in this review with codifying some of these data into a series of generalized statements about job displacement. Some of the findings cited have been well substantiated in a number of studies, while other findings have been limited to a single study. We know how displaced workers find jobs, the factors associated with reemployment, the various mobility patterns of displaced workers, and some of the social and economic consequences of job displacement. Nevertheless, much remains to be known about job displacement.

A series of problems must still be investigated. Some of these problems arise from the need to test further inconclusive research findings; others represent the need to deal with unexplored areas in job displacement. In this chapter we shall suggest some research needs for extending and systematizing the knowledge in this field.

The Need for Recognition and Identification of Problems

Probably no field of inquiry has suffered as much from under-conceptualization as job displacement. There is a real need to develop a number of rigorously defined concepts in this field. For example, the terms "job displacement" and "job dislocation" are often used interchangeably to denote (1) permanent separation from a job, (2) temporary layoff, or (3) transfer to another job within the same company. These two terms are used without a common or specific empirical meaning. Similarly, they refer without differentiation to workers who are (1) displaced by mechanization or automation, (2) displaced by the movement of a plant, or (3) displaced by organizational changes within a company. If proper criteria could be established to distinguish these three types of displacement, we might assess the adjustment of workers to each type and make comparisons. We recognize that in any concrete case job displacement may result from a number of interrelated factors (e.g., organizational changes and changes in technology). The assumption made in job displacement research is that conceptual distinction is not necessary. This assumption has not been tested to date.

The lack of conceptualization in job displacement research results

from the fact that each study tends to be treated as a separate case. This means that the research is generally descriptive rather than analytical. Without conceptualization, job displacement research cannot proceed beyond the stage of descriptive studies of isolated and unique cases.

The Need for Methodological Sophistication

In job displacement research, considerable progress has been made in the treatment of methodological problems. There are, however, certain problems that must still be overcome. Three problems deserve special attention. First, basic to the question of response validity is the question of recall. The longer the period of time between the shutdown and the interview, the greater the degree of distortion in recall. One corrective would be to use a longitudinal design where the respondent could be reinterviewed. Cost might be a limiting factor in the use of such a design, but the gain in accuracy would be undeniable. In addition, the validity of certain respondent reports needs to be checked. Responses on the number of months unemployed, the source of job referrals, the extent of aid from the state employment service, and the number of job changes are frequently accepted at face value. Even in cases where records are available for an accuracy check of the information, this effort is rarely made.

Second, the length of the study period and other time reference points need to be standardized. Investigators in job displacement research have used study periods ranging from six months to five years. The reasons for the length of the study periods are frequently quite hazy. The number of months unemployed, the skill and wage comparisons between the old job and the new job, the number of job applications—all of these variables are influenced by the length of the study period. Displaced workers who were terminated 6 months previous to a study cannot be validly compared with other displaced workers who were terminated 18 months previous to a study. Standardization of the length of the study period is necessary if findings are to be compared.

Finally, there is the problem of measurement. There is still a tendency in job displacement research to rely on using single items for measuring the adjustment to job loss. Thus, the number of months unemployed or a comparison of wages between the present and past job may be used singly as indicative of adjustment to job loss. Rarely are both items combined into an index. Multiple-item measurements have been developed in most of the social sciences, but no attempt has been made to increase the validity of measurement in job displacement by applying the scaling theory

and knowledge of index construction. A standardized measure of economic adjustment including such items as employment status, changes in the level of savings and health insurance, mobility patterns, and income status would be invaluable. An attempt to construct such an index has been initiated by one of the authors in a treatment of the mental health problems of job displacement.

The Need for Comparative Studies

Research into job displacement has been marked by two serious shortcomings: (1) the relatively small number of studies that have been conducted to date[1] and (2) the lack of comparativeness among existing studies. The need at the present time is to increase the number of studies and to make comparative investigations rather than unique case studies. These two activities, however, must follow certain guidelines. First, in increasing the number of studies, emphasis should be on selecting certain crucial cases for study. Too often in the past, the selection of the cases has been based on "brush-fire" considerations, i.e., the desire to see how a particular group adjusts to job displacement in an emergency. We are at a point in job displacement research where we need to *select* cases for study which will permit us to fill in a gap in our knowledge of the job displacement process. We know little, as yet, about the adjustment of certain occupational groups (e.g., white-collar) to job displacement, or the pattern of job displacement in certain industries (e.g., electronics), or the pattern of adjustment to job displacement in a given region (e.g., the Southeast or West). Research into these cases would meaningfully increase our knowledge in the field.

A second consideration would be to select cases with a view to creating an experimental design to test a given hypothesis. Two cases of job displacement in the same industry occurring in the same labor market possibly at the same time would approach an experimental model if the two cases differed in certain important characteristics such as method of termination and retraining possibilities. One example of such a design is to be found in the work of Clague, Couper, and Bakke (2). The authors compared the reemployment and unemployment experiences of ex-rubber workers in New Haven and Hartford when two plants closed almost simultaneously in those cities. Another example of this kind of research is the work by Wilcock and Franke in their studies of four Armour meat packing and processing plants in four different labor markets (17). These re-

[1] See appendix.

searchers were able to compare a series of problems in the four plants. They are conducting a fifth study in another labor market. This is an excellent example of how knowledge can be systematically advanced in the field of job displacement research through the use of comparative studies approximating an experimental control situation.

We have suggested that comparative research is desirable in job displacement. Comparative research does not always require the use of two or more shutdowns. It is possible to compare the job displacement process at points in time after a single shutdown. In studying the mental health of displaced workers, for example, the emphasis might be placed on comparing the morale scores of the same workers over a period of time using the changing social environment as a series of comparative situations.

The Need for Interdisciplinary Research

The student of job displacement soon becomes aware that he is dealing with a highly complex set of human motivations and behavior. The complexity of the phenomena makes it impossible for any one discipline to offer a complete explanation of how workers adjust to job displacement. The loss of work requires not only an economic adjustment, but a series of social adjustments within the family and the community. The study of job displacement calls for an interdisciplinary approach using the concepts and methods from a number of disciplines. Traditionally, research into job displacement was a concern of the economist. Quite recently a number of sociologists and psychologists have become interested in the problem both from a substantive and a theoretical point of view. Job displacement is viewed by sociologists and psychologists as an instance of rapid status change or downward mobility. They are interested in studying the social and psychological concomitants of this change and assessing their impact on the class structure. It seems particularly true in job displacement that the assumptions of one discipline become the problems of the next.

An interdisciplinary approach may shed light on some of the traditional substantive problems of job displacement. By utilizing sociological concepts in investigations of decision making, Fowler and Smith, for example, were able to probe the individual and group factors that accounted for the geographical immobility of workers who were displaced (7). It is entirely possible that some of the underlying motivations in job displacement behavior can be ascertained through psychological projective techniques. These data, in turn, can be used to increase the accuracy of predictions about the adjustment to job displacement. Encouraging interdisci-

plinary research into job displacement would contribute new perspectives to research in this field.

These are some of the general needs in job displacement research if this field of study is to develop an organized body of knowledge capable of predicting the behavior of future groups of displaced workers.

Specific Research Projects

We now turn to the specific research projects that seem to warrant attention. We shall not try to make an exhaustive listing of what should be done, but rather indicate some of the more important problems that need study. These projects can be classified under four headings: (1) factors associated with the reemployment of displaced workers, (2) the process of job seeking, (3) patterns of job mobility, and (4) the noneconomic consequences of job displacement.

Factors Associated With Reemployment

We know a good deal about the status characteristics of displaced workers in relation to reemployment opportunities. Sex, race, skill, education, age, and community involvement are all related to reemployment opportunities. We know considerably less about the *relative* importance of these variables in regard to reemployment. Consistently, age and education seem to be related to reemployment opportunities. Is the factor of age affected by the factor of education in job seeking? Within a given skill level, how important are age and education in finding a job? Are Negroes at a disadvantage in the job market because they are Negroes or because they lack skill and education? The specification of the relationships among these variables would be regarded as an important advance in the field.

It is also necessary to consider the problem of specifying new variables that are related to reemployment. Research into the problems of job displacement has emphasized the factors that are discernible from questionnaire responses or official records. Variables derived from other techniques may be equally as valuable in predicting the labor market behavior of displaced workers. Psychological depth techniques, for example, might isolate certain personality types that have success in finding reemployment. We must not only seek the specification of relationships between known variables but also intensify our efforts to isolate new variables.

Further attention should also be paid to the role of institutional aids in workers' adjustment to job displacement. We should examine the relationship of severance pay to adjustment under more controlled conditions. Is severance pay an aid or hindrance to job seeking? Another institutional

aid about which we know little is retraining. What part can retraining play in adjusting to job loss? Which workers are retrainable and how are these workers to be selected? What is the best retraining program for the displaced workers—on-the-job training or public instruction? What is the relationship between a given retraining program and consequent jobs, i.e., how much of the training is used on new jobs? What changes in attitudes and plans for the future occur during a retraining program? This last question and a number of others could be answered by tracing the workers' progress through the program and into the labor market. Of crucial importance in job retraining is the task of isolating a set of factors which can be used to predict the success or failure of a given retraining program.

Finding a Job

A good deal is known about how displaced workers seek and find jobs. The role of informal job leads as against formal job leads in finding reemployment has been well established through surveys. It would be worth while to check these responses where available records exist. It is possible that the state employment service plays a greater role in employment placement than can be gleaned from questionnaire responses. Referral records of the state employment service might be matched against the responses of individuals as a check on validity of these data. We also know very little about the role of private employment agencies in finding jobs for displaced workers. Some attention should be given to this question. Do certain groups of displaced workers find these agencies useful while others do not? What image do displaced workers have of state and private employment agencies?

Patterns of Mobility

Several problems dealing with the mobility of displaced workers would make fruitful research projects. Comparative information is needed on mobility patterns in different labor markets. We need to know (1) the stability of new jobs in different industries and different kinds of labor markets; (2) the potential of different industries and labor markets to reabsorb displaced workers and to provide job opportunities consistent with the displaced workers' earlier economic status. These data will permit a wide range of predictions about the adjustment of displaced workers.

In spite of their rise in occupational prominence, little is known about the mobility patterns of displaced white-collar and professional workers. (1) Do they exhibit the same patterns of geographical mobility as blue-collar workers? (2) Are there different types of mobility among displaced

white-collar workers? What proportion are characterized by occupational changes, skill level changes, industry changes, or wage changes? (3) How do these workers compare with blue-collar workers in job satisfaction changes?

The Noneconomic Consequences of Job Displacement

Very little is known about the noneconomic consequences of job displacement. What kinds of psychological and social adjustments are displaced workers required to make? What changes take place in their day-to-day living, especially within the family and friendship groups? How do these affect their economic adjustment, especially their search for work? We need to construct sensitive measures that can determine facets of economic and psychological adjustment. One special project should be noted —the need to do a time-budget and inventory study on different groups of displaced workers to find out how they spend a typical day during unemployment and how they use their energies. A study in depth, using clinical and observational methods, would probably be more appropriate since it is doubtful whether such data could be gathered by survey techniques.

The role of the worker's mental health has been considerably neglected as a factor influencing adjustment. How much zest and vigor is shown by the worker in his day-to-day living and what factors account for this? Do certain psychiatric problems occur when the worker is suddenly displaced? What psychological impact does sudden displacement have in contrast to gradual displacement? These problems and others could be studied both by intensive clinical methods and a longitudinal survey of worker morale.

Summing Up

We have outlined a series of needs in job displacement research and a series of projected studies which would add greatly to the systematic accumulation of knowledge in this field. Let us conclude with several suggestions as to how a program of research in job displacement might be applied. Three suggestions would seem to merit special attention. First, there is an obvious need for some central direction to this research. Individual studies undertaken outside a common framework would not be as valuable as studies conducted under a unified conceptual framework. In the latter case, the standardization of concepts and methods would permit a comparability which is often lacking in independently conceived research. It is worth noting that the studies undertaken by the Department of Labor in the 1930's have become extremely useful for comparative purposes

because the investigators operated under a common framework. To bring this standardization about, it would be worth while to establish a clearinghouse on job displacement research based in a university, foundation, or government agency where interested scholars could have access to comparative data from already completed studies.

We also feel that encouragement should be given to distressed industries to follow the Armour example and establish funds for research into the problems of job displacement in those industries. The establishment of the Armour Automation Fund Committee resulted in a number of investigations into job displacement in meat processing and packing companies. Consequently, our knowledge of job displacement in this industry has become quite extensive. Finally, we make a plea for greater distribution of existing research studies on job displacement. It is unfortunate that a number of studies either have not been published to date or were published a number of years after they had been completed. Arrangements should be made for supporting the publication of such research and its dissemination to interested scholars. We feel that these steps would go a long way toward establishing an integrated and fruitful program of job displacement research.

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SUMMARY OF DATA ON SEVENTEEN STUDIES OF JOB DISPLACEMENT[a]

N—Number of cases. Indicated only when the number differs from the size of the study sample (Col. 5). n.i.—Not indicated in study.

Study (and year begun)	Location	Industry	Number of Displaced Workers	Size of Study Sample	Duration of Study Period[b] (mos.)	Severance Pay	Workers With New Jobs (percentages unless otherwise indicated)												Significant Factors Affecting Reemployability
							Skill Level Relative to Old Job[c]			Wages Relative to Old Job			Reemployed in Same Industry	Self-Employed	Employed in Same Kind of Work	Method by Which New Job Found		Reemployed Within One Month[f]	
							Same	Lower	Higher	Same	Lower	Higher				For-mal[d]	Infor-mal[e]		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Robert J. Myers 1929	Chicago, Ill.	clothing mfg.	300-500	370	18	$500 to voluntary quits	not indicated			23.2 (N = 276)	46.4	30.4	20.0	4.6	20.3	not indicated		40.0 (N=240)	**Age and Sex.** Men in the 35-39 age group were more successful than others.
Lubin 1929	3 major metro-politan labor markets	20 indus-tries	n.i.	750	12	n.i.	not indicated			27.1 (N = 410)	48.0	18.8[g]	32.7 (N=410)	n.i.	45.9 (N=410)	not indicated		11.0 (N=410)	**Age.** Workers under 45 years were more successful than others.
Clague, Couper, and Bakke 1929	New Haven, Conn.	rubber (foot-wear) mfg.	729	672	11	based on service	32 (N = 158)	57	11	[h]	72.7	[h]	n.i.	3.2 (N=523)	n.i.	n.i.	82.7[i]	62.1 (N=518)	**Skill.** Skilled men were less successful than unskilled men. **Sex.** Younger women were more successful than men.
Clague, Couper, and Bakke 1929	Hartford, Conn.	rubber (tires) mfg.	1,105	534	11	none	not indicated			[h] (N = 420)	91.2	[h]	n.i.	n.i.	n.i.	not indicated		56.5 (N=441)	
Palmer and Williams 1936	Phila-delphia, Pa.	textile (hosiery) mfg.	1,745	673	30	n.i.	not indicated			not indicated			[j]	n.i.	n.i.	not indicated		26.4 (N=617)	**Skill.** Reemployment was related to skills adaptable to changing technology. **Age.** Workers over 50 years were less successful.
Creamer and Coulter 1936	Man-chester, N. H.	textile mfg.	15,000	1,068	13-22	n.i.	not indicated			not indicated			25.4 (N=319)	n.i.	n.i.	not indicated		23.7 (N=310)	**Age.** Workers over 55 years were less likely to find jobs. **Sex.** Women under 34 years were less likely to be reemployed than men; women over 34 years had the same chance as men.
Creamer and Swack-hamer 1937	Man-chester, N. H.	cigar mfg.	600	328	60	none	not indicated			[k]	[k]	[k]	40.6[l] (N=143)	39.6[m] (N=116)	n.i.	not indicated		12.9 (N=116)	**Age.** Older workers were less successful than others. **Skill.** Obsolescence of skills made reemployment difficult.
Myers and Shultz 1948-49	Nashua, N. H.	textile mfg.	3,500	sample I 55 quits	10	n.i.	64 (N = 51)	20	9[g]	14	54	23[g]	43	n.i.	n.i.	2.0	78.0	82.0	**Early Quitters.** Workers who quit before shutdown had more success than others.
				sample II 150 layoffs			73	17	4[g]	37	41	14[g]	68			4.0	83.0	65.0	
Adams and Aronson 1949-50	Auburn, N. Y.	heavy machin-ery mfg.	1,707	334[n]	18-54[n]	based on service	56 (N=141 at 54 months)	28	16	34 (N=145 at 54 months)	28	37	38 (N=145 at 54 months)	n.i.	41 (N=309 at 18 months)	1.3 (N=145 at 54 months)	79.0	n.i.	Available job opportunities more important than personal and social attitudes.
Sheppard and Stern 1956	Detroit, Mich.	auto parts mfg.	5,000 (approx.)	348	12	none	not indicated			not indicated			n.i.	n.i.	n.i.	not indicated		n.i.	**Age.** Most significant factor — the older the workers, the less chance of their reemployment. **Skill.** Less skilled were less successful than others. **Sex.** Women were less successful than men. **Race.** Negroes were less successful than whites.
Wilcock [illegible]	Mt. Vernon	steel					not indicated			not indicated			11.0[o]	40.0	15.0[p]	not indicated		n.i.	**Education.** Most important factor— the less educated were less successful than the better educated.

and Swackhamer 1937	Manchester, N. H.	cigar mfg.	600	328	60	none	not indicated	k	k	k	40.6[e] (N=143)	39.6[e] (N=116)	n.i.	not indicated	(N=116)	**Skill.** Obsolescence of skills made reemployment difficult.
Myers and Shultz 1948-49	Nashua, N. H.	textile mfg.	3,500	sample I 55 quits sample II 150 layoffs	10	n.i.	64 20 9[a] (N = 51) 73 17 4[a]	14 54 23[a] 37 41 14[a]			43 68	n.i.	n.i.	2.0 78.0 4.0 83.0	82.0 65.0	**Early Quitters.** Workers who quit before shutdown had more success than others.
Adams and Aronson 1949-50	Auburn, N. Y.	heavy machinery mfg.	1,707	334[n]	18-54[n]	based on service	56 28 16 (N=141 at 54 months)	34 28 37 (N=145 at 54 months)			38 (N=145 at 54 months)	n.i.	41 (N=309 at 18 months)	1.3 79.0 (N=145 at 54 months)	n.i.	Available job opportunities more important than personal and social attitudes.
Sheppard and Stern 1956	Detroit, Mich.	auto parts mfg.	5,000 (approx.)	348	12	none	not indicated	not indicated			n.i.	n.i.	n.i.	not indicated	n.i.	**Age.** Most significant factor — the older the workers, the less chance of their reemployment. **Skill.** Less skilled were less successful than others. **Sex.** Women were less successful than men. **Race.** Negroes were less successful than whites.
Wilcock 1956	Mt. Vernon, Ill.	steel car mfg.	1,908	1,539	30	none	not indicated	not indicated			11.0[e] (N=1,162)	40.0 (N=1,162)	15.0[e] (N=1,162)	not indicated	n.i.	**Education.** Most important factor—the less educated were less successful than the better educated. **Age.** Workers over 45 years had less reemployment.
Sheppard, Ferman, and Faber 1957-58	Detroit, Mich.	automobile mfg.	4,500	sample I 185 sample II 314	15 24	none	64 21 15 (N = 132) q 45 q (N = 30)	not indicated			27.0 (N=180) n.i.	n.i.	n.i.	5 86 (N=116) not indicated	n.i.	**Age.** Most important factor — the older workers were less successful than others. **Skill.** Skilled workers were more successful than semiskilled and unskilled workers.
Fowler and Smith 1958	Buffalo, N. Y.	automobile mfg.	1,100	256	6	none	q 18 q (N = 72)	h 46.0 h (N = 72)			n.i.	4.0 (N=78)	n.i.	3.0 54.0 (N=58)	24.0 (N=78)	**Seniority.** Workers with high seniority transferred to another plant. **Age.** Youth or old age were not significant factors in reemployment.
Ferman and Hudson 1959	Adrian, Mich.	aluminum mfg.	617	487	15	none	not indicated	not indicated			n.i.	18.8 (N=260)	n.i.	6.0 84.0 (N=260)	54.0 (N=260)	**Age.** Older workers were reemployed less frequently than younger workers. **Education.** Less educated were reemployed less frequently than others. **Mobility.** Geographically mobile workers were more successful than others.
Wisc. State [illegible] ment Service 1960	Wisc.	auto parts mfg.	1,755	1,695	[illegible]	n.i.	not indicated	(N = 418)			(N=418)			(N=[illegible])		**Age.** Younger workers were more successful than older workers. **Sex.** Men were more successful than **Skill.** Skilled workers were reemployed more often than less skilled workers.
Ferman 1960-61	Detroit, Mich.	newspapers	1,267	sample I (mail) 297 sample II (interview) 232	6	for editorial and commercial workers	not indicated	not indicated 44 37 19 (N = 185)			40 (N=157) 80 (N=185)	n.i. 1.7 (N=185)	n.i.	2 79 (N=157) 2 52 (N=185)	58 (N=157) 88 (N=185)	**Skill Level.** More important than age or education.
Wilcock and Franke 1960-61	East St. Louis, Ill.; Columbus, Ohio; Fargo, N. Dak.	meat packing and processing	2,411	sample I (mail) 1,920 sample II (interview) 243	12	for all workers	28.9 36.1 35.0 (N = 926) 22.4 59.5 18.1 (N = 183)	not indicated			13 (N=926) n.i.	n.i.	n.i. 19 (N=160)	5 72 (N=928) 7 70 (N=182)	12 n.i.	**Age.** Older workers were less successful than younger workers. **Race.** Negroes were less successful than whites. **Education.** Less educated were less successful than the educated. **Sex.** Women were less successful than men. **Skill.** Nontransferability of skills impeded reemployment.
Wilcock	Oklahoma	meat packing		237 late layoffs (mail)		for	not indicated	not indicated			n.i.	n.i.	14 (N=97)	4 73 (N=100)	54 (N=113)	**Sex.** Women were less successful than men. **Race.** Not a factor. **Age.** Workers over 45 years found new jobs less often

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Sheppard, Ferman, and Faber 1957-58	Detroit, Mich.	automobile mfg.	4,500	sample I 185 sample II 314	15 24	none	64 21 15 (N = 132) q 45 q (N = 30)	not indicated	27.0 (N=180) n.i.	n.i.	n.i.	5 86 (N=116) not indicated	n.i.	**Age.** Most important factor — the older workers were less successful than others. **Skill.** Skilled workers were more successful than semiskilled and unskilled workers.
Fowler and Smith 1958	Buffalo, N. Y.	automobile mfg.	1,100	256	6	none	q 18 q (N = 72)	h 46.0 h (N = 72)	n.i.	4.0 (N=78)	n.i.	3.0 54.0 (N=58)	24.0 (N=78)	**Seniority.** Workers with high seniority transferred to another plant. **Age.** Youth or old age were not significant factors in reemployment.
Ferman and Hudson 1959	Adrian, Mich.	aluminum mfg.	617	487	15	none	not indicated	not indicated	n.i.	18.8 (N=260)	n.i.	6.0 84.0 (N=260)	54.0 (N=260)	**Age.** Older workers were reemployed less frequently than younger workers. **Education.** Less educated were reemployed less frequently than others. **Mobility.** Geographically mobile workers were more successful than others.
Wisc. State [illegible] ment Service 1960	Wisc.	auto parts mfg.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(N = 418)	(N=418)			(N=337)		**Age.** Younger workers were more successful than older workers. **Sex.** Men were more successful than **Skill.** Skilled workers were reemployed more often than less skilled workers.
Ferman 1960-61	Detroit, Mich.	newspapers	1,267	sample I (mail) 297 sample II (interview) 232	6	for editorial and commercial workers	not indicated	not indicated 44 37 19 (N = 185)	40 (N=157) 80 (N=185)	n.i. 1.7 (N=185)	n.i.	2 79 (N=157) 2 52 (N=185)	58 (N=157) 88 (N=185)	**Skill Level.** More important than age or education.
Wilcock and Franke 1960-61	East St. Louis, Ill.; Columbus, Ohio; Fargo, N. Dak.	meat packing and processing	2,411	sample I (mail) 1,920 sample II (interview) 243	12	for all workers	28.9 36.1 35.0 (N = 926) 22.4 59.5 18.1 (N = 183)	not indicated	13 (N=926) n.i.	n.i.	n.i. n.i.	5 72 (N=928) 19 (N=160) 7 70 (N=182)	12 n.i.	**Age.** Older workers were less successful than younger workers. **Race.** Negroes were less successful than whites. **Education.** Less educated were less successful than the educated. **Sex.** Women were less successful than men. **Skill.** Nontransferability of skills impeded reemployment.
Wilcock and Franke 1960-61	Oklahoma City, Okla.	meat packing and processing	446	237 late layoffs (mail) 134 early layoffs (interview)	6	for all workers	not indicated	not indicated 7 93 — (N = 55)	n.i. 14.0 (N=59)	n.i.	n.i.	14 (N=97) 4 73 (N=100) 14 (N=59) not indicated	54 (N=113) n.i.	**Sex.** Women were less successful than men. **Race.** Not a factor. **Age.** Workers over 45 years found new jobs less often. **Education.** Better educated were more successful than less educated.

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[a]There are 2 entries for the Clague, Couper, and Bakke study.

[b]Duration of study period is the period of time between the shutdown and the solicitation of data from the respondents.

[c]Based on *Dictionary of Occupational Titles*.

[d]This means referral by a company, union, or state or private employment agency.

[e]This means referral by friends or relatives, direct application to a company, or solicitation from prospective employers.

[f]The jobs consisted of 30 hours or more of work per week, regardless of their duration.

[g]Total percent does not equal 100 because some respondents did not give information.

[h]"Same" and "higher" designations were combined; thus figure was given only for the percentage of workers who were reemployed at a lower wage.

[i]Data were given for successful methods of obtaining 861 jobs.

[j]Study was limited to displaced hosiery workers who were either seeking work in the hosiery industry or who had been reemployed in that industry.

[k]Percentages were not available, but median income of displaced workers was approximately one-half of their income in last 6 months of work.

[l]Self-employment was included.

[m]At the time of interview. No data were reported for total self-employment during the study period.

[n]334 ex-Harvester workers were interviewed at home 18 months after the shutdown. A mail questionnaire was sent to 145 of these workers 54 months after the shutdown.

[o]The investigator reported that 11 percent were reemployed in the same industry at the time of the interview. No data were reported for industrial classification of all jobs during the study period.

[p]Percent in same occupation at the time of the interview. No data were reported for occupational classifications during the entire study period.

[q]"Same" and "higher" designations were combined; thus figure was given only for the percentage of workers who were reemployed at a lower skill level.